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THE EVALUATION OF THE SCHOOL LUNCH MENUS AT A DEMONSTRATION SCHOOL

by

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4314

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TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION.	1
II. REVIEW OF LITERATURE.	3
III. RESULTS AND ANALYSES.	11
Variety in Foods Served	14
Evaluation of Menus	17
Attractiveness.	20
Variety in the Twenty Menus	20
Color	20
Flavor.	21
Form, A. P.	24
Shape	25
Texture	26
Harmony, Contrast, and Balance in the Twenty Menus.	27
Comments on Individual Menus by a Committee	28
Rating of Twenty Menus by One Judge	33
Method of Preparation	35
Distribution among Employees.	38
Time of Serving	39
Adequacy.	41
Comparison of Size of Servings with Requirements made by the National School Lunch Act	41
Comparison of Number of Servings with Requirements Shown in <u>A Guide to Good Eating</u>	44
School's Responsibilities for Overcoming Dietary Inadequacies.	52
Food Waste.	53
Management of Labor	58
Cost of Food Served	66
IV. SUMMARY, FINDINGS, AND RECOMMENDATIONS	70
BIBLIOGRAPHY.	80

TABLE OF CONTENTS

CHAPTER	PAGE
APPENDIXES.	82
A. CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS	82
B. COMMENT ON HARMONY, CONTRAST, AND BALANCE IN MENUS BY THE COMMITTEE OF SIX JUDGES	122
C. JOB SPECIFICATION	129
D. COST OF FOOD SERVED	154

LIST OF TABLES

TABLE	PAGE
I. Variety in School Lunch Menus as Expressed through the Number of Colors, Flavors, Forms, Shapes, and Textures Used	22
II. Variety in School Lunch Menus as Expressed through the Particular Colors, Flavors, Forms, Shapes, and Textures Used	23
III. Rating of Menus as to Harmony, Contrast, and Balance . . .	34
IV. Variety in School Lunch Menus as Expressed through the Number of Methods of Preparation Used.	37
V. Variety in School Lunch Menus as Expressed through the Particular Methods of Preparation Used	37
VI. Assignment of Preparation of Dishes to Employees	39
VII. Time Food Was Served	40
VIII. Adequacy of School Lunch Menus	43
IX. Adequacy of Foods Eaten in Twenty-Four Hour Period	49
X. Waste in Individual Plates	55
XI. Per Cent of Plates on Which Given Food Was Wasted.	57
XII. Comparison of the Total Daily Food Costs for Plate Lunches with Fifty Per Cent of the Total Daily Receipts from Plate Lunches	69

CHAPTER I

INTRODUCTION

The children of today--the men and women of tomorrow--may be suffering from actual hunger; not the hunger of normal healthy youngsters, but that "hidden" hunger which occurs in situations where the child does not receive a nutritious diet.

Today great stress is being placed on the educational aspects of the school lunch, both in North Carolina and in the country as a whole. It is recognized that the school lunch should be a part of a child's total educational experience. Before the lunchroom or cafeteria can be set up as an educational center it must fulfill the requirements for providing adequate and attractive food at economical cost for values received. Only then can it offer opportunity for guidance toward good health.

The present study was undertaken in an attempt to determine whether the lunch menus at the Curry Demonstration School of the Woman's College of the University of North Carolina are adequate and attractive and can be prepared with economical use of the time, labor, and money available. With ample time, efficient labor, and sufficient funds, the problem of providing adequate, attractive and appealing food is minimized; when these factors are limited, the problem becomes more complex.

The Curry Demonstration School Cafeteria was chosen because, as the name indicates, it is a part of a demonstration experimental school, attempting more or less to set the pattern for other school lunch programs in the state. Its volume of student patronage is limited as are

the time, labor, and funds. At present the policies of the Curry School Administration and of the cafeteria management are that the cafeteria shall be a self-supporting, non-profit organization and shall afford adequate, attractive lunches at a relatively low cost.

Two types of lunch are served to the children: first, the plate lunch; second, the individual items of soup, sandwich, milk, and ice cream which may furnish a nutritious meal. In this particular study, only the plate lunches were considered. It is generally accepted by the school lunch program that until a child has learned the principles of selecting an adequate diet he should not be given absolute freedom in the choice of his food. The study of the school lunch plate is the first step toward an understanding of that greater problem of the adequacy of the total food service and nutrition education of the boys and girls.

(1) A check list, based on the Federal Type A lunch pattern, was used for judging the menus as to (a) attractiveness, (b) adequacy, (c) time involved in the preparation, and (d) the distribution of labor; (2) specific and planned observations were made of (a) time, (b) labor, and (c) food waste; and (3) food costs were calculated. A short survey was conducted in which each Curry student participated, listing on a questionnaire the foods he had consumed within a given twenty-four hour period.

From this study it is hoped that a scale for evaluating school lunch menus may be developed which may serve as a guide to similar school lunch situations in the State and throughout the country.

CHAPTER II

REVIEW OF LITERATURE

Three times on the campus of the Woman's College of the University of North Carolina enough interest has been aroused to stimulate studies with regard to diets and eating habits of either children or young women of the college level.

In 1943 Eunice Bryan Outlaw endeavored to determine whether improvements could be brought about in the food habits of first grade children by means of a nutrition teaching unit.¹ This study was centered upon the first grade children of the Curry Demonstration School of the Woman's College of the University of North Carolina. Through the personal interview-questionnaire method, information regarding food habits of the children when they started to school was obtained from both the boys and girls and from the parents. Next, observations were made of each child's eating habits in the school lunchroom. Finally, after the nutrition education program, information was obtained again from both children and parents by individual interviews. According to this study, a comparison of the child's eating habits before and after the nutrition education program revealed some improvement in the majority of cases. "A close relationship between economic status and intelligence quotients with improved eating habits was indicated."² In her

1. Eunice Bryan Outlaw, A Study to Determine the Effect of a Nutrition Program on the Eating Habits of a Group of First Grade Children. Master's Thesis, Greensboro, North Carolina: The Woman's College of the University of North Carolina, 1943. 56,24 pp.

2. Ibid. An Abstract.

recommendations, she stated that while the agreement of the reports of the parents and children is substantial, it is not perfect enough to bear the entire burden of securing research data for the evaluation of children's eating habits. However, if this method is to be used, one should be checked against the other. When possible, observation should be conducted.³

One other study was carried on in the same School Cafeteria. Evelyn Terry Sharpe made a survey of the diets of the boys and girls in the fourth, fifth, and sixth grades in an attempt to find a possible relationship between diet, health, and general growth of these children.⁴

A three day dietary record of all food eaten during the day was kept by each of the seventy-two children and "rated as excellent or barely adequate by a score card based on the seven food groups recommended by the Bureau of Human Nutrition and Home Economics."⁵ Each child was weighed and measured near the beginning and at the close of the study. Records of absences with the cause of each absence were obtained from each teacher. Moreover, a posture rating for each child was obtained.

In general, the diets of these children were found to be poor, although it was believed that the families of the majority of these boys and girls were financially able to provide adequate diets. Evidently, they lacked either the interest, desire, or the knowledge of how to plan nutritionally balanced menus. Miss Sharpe found no relation between the

3. Ibid., p. 47.

4. Evelyn Terry Sharpe, A Survey of the Diets of the Children in the Fourth, Fifth, and Sixth Grades of Curry School. Master's Thesis, Greensboro, North Carolina: The Woman's College of the University of North Carolina, 1947, 46 pp.

5. Ibid., p. 17.

quality of the diet and growth during the short period of her study. Again, there seemed to be no relation between the quality of the diet and the number of days lost because of illness. Yet there did seem to be some relation between posture and the quality of the diet; on the whole, those with the better diets had the better posture.

Recommendations of Miss Sharpe were that more children need to eat the plate lunch offered in the school cafeteria, that more citrus fruits or tomatoes need to be included in the school lunch diet to offset the vitamin C (ascorbic acid) deficiency, and that adult education needs to reach the families of those children who either bring lunch or go home at noon. It was also suggested that in a future study there be a follow-up of the diets of these same children for a longer period of time or perhaps a longer study of growth and illness correlated with the longer diet study.⁶

The third study, pertaining specifically to the adequacy of diets, was carried on by Nancy McCall in 1946.⁷ Her study was planned as an evaluation of the adequacy of the diets of college seniors in home economics in the home management house. The data were obtained from the original records of one of the home management houses on the campus of the Woman's College of the University of North Carolina. The young college women who lived in this particular home management house were on a specific food budget "established so that they lived /for different periods/on low, medium and liberal cost levels which were 30¢ to 35¢,

6. Ibid., p. 34.

7. Nancy McCall, An Evaluation of the Adequacy of Diets Planned in a Home Management House. Master's Thesis, Greensboro, North Carolina: The Woman's College of the University of North Carolina, 1946. 31, 11 pp.

40¢ to 45¢ and 60¢ per person per day, respectively."⁸ The records consisted of food purchases and inventories recorded before and after each period of residence. "One set of menus for each cost level was analyzed."⁹

According to Miss McCall's results, the students living in the home management house were getting a completely adequate diet on only the liberal cost level. But it was believed that with more careful attention to their planning of menus, an adequate diet would have been possible on each cost level. "The low cost level was found to be inadequate in all of the specific nutrients except Vitamin A and ascorbic acid. The medium cost level while slightly deficient in calories, niacin and iron was more nearly adequate than the low cost level."¹⁰

She stated that her study would have been better if the waste had been considered for each cost level.

The first two references were consulted frequently since they were conducted in the identical demonstration school as that of the present study. In fact, some of the same children probably were subjects of all three studies. The third reference was interesting in that the adequacy of diets was determined, although the study was not carried on in a school lunch situation.

Among those conducting related studies in other states, Ruth Evelyn Preston, in 1931, made a study of the adequacy of the noon lunch

8. Ibid., p. 1.

9. Ibid., p. 16.

10. Ibid., p. 27.

in the rural schools of two counties in Michigan.¹¹ She carried on a qualitative study of the contents of the lunch boxes by means of direct contact with the teacher of each school and by the use of questionnaires. Her general conclusions were that, as a whole, "the lunches of the rural school children are inadequate for the body requirements of the ages represented."¹²

Luretha Henderson Pinnell in 1943 determined the adequacy of the W. P. A. lunch and the traditional carried lunch.¹³ Both types of lunch were found to be inadequate, but the carried lunch was more so. "The greatest inadequacies were milk, fruits and vegetables of the proper kinds and amounts, and possibly more butter should be included as the calorie value is estimated too low to supply one-third of the child's daily need."¹⁴ She felt that the limited number of cases (forty) included in her study precluded any general conclusion concerning the adequacy of the school lunches.

Mary Joyce Taliferro carried on a study in 1940 of fourteen cafeterias in Texas schools with an enrollment of five hundred to one thousand. She accomplished three purposes: reviewed the information about school cafeteria practices found in the current literature; presented the results of questionnaires sent to the fourteen high schools

11. Ruth Evelyn Preston, A Study of the Adequacy of the Noon Lunch in the Rural Schools of Two Counties in Michigan. Master's Thesis, Lansing, Michigan: Michigan State College, 1931. 35 pp.

12. Ibid., p. 33.

13. Luretha Henderson Pinnell, The Adequacy of Two Types of School Lunches in Eastern Oklahoma Communities. Master's Thesis, Norman, Oklahoma: The University of Oklahoma, 1943. 119 pp.

14. Ibid., p. 104.

in Texas; and compared the lunch situations in the other schools with that of the Denton High School Cafeteria and made recommendations for its improvement. Miss Taliaferro believed that two good devices for developing desirable habits of food selection were the use of the plate lunch, by which the dietitian can encourage the use of certain foods, and preparation and service of excellent food.¹⁵

In Texas in 1937 Eloise Langford conducted a study of time and cost in the preparation of four classes of foods--meats, vegetables, salads, and desserts--in the college cafeteria of the Texas State College for Women. In this study she included the costs of the foods as purchased and the costs of labor during the preparation of foods for cooking and for serving. Thus she was able to determine which type of foods yielded the greatest profit. According to Miss Langford's results, vegetables proved to be the most profitable food group.¹⁶ In illustrating to her readers the distribution of the food dollar, she compiled a table in which the distribution of the food dollar in different types of school food units were compared. The public school lunchrooms were included as an example to be compared with the college cafeteria in Texas.¹⁷

In Collinsville, Texas, Mabel Adelia Boren made a study to determine the plate waste from the type "A" lunch served in the Collins-

15. Mary Joyce Taliaferro, A Study of Cafeterias in Texas Schools with an Enrollment of 500 to 1000. Master's Thesis, Denton, Texas: Texas State College for Women, 1940. 93 pp.

16. Eloise Langford, A Study of Time and Cost in the Preparation of Four Classes of Foods in a College Cafeteria. Master's Thesis, Denton, Texas: Texas State College for Women, 1937. 100 pp.

17. Ibid., pp. 4-5.

ville School Lunchroom during the school year of 1947-1948.¹⁸ She studied the problem during October and again in April. Food portions were measured and weighed at the beginning of the serving period and were compared with the weighed plate waste. Both the total waste of each food and the individual waste were determined. Miss Boren found that the children under observation were being well-fed at school on an average in spite of the plate waste; but she did reveal certain nutritional deficiencies and weaknesses.¹⁹ According to her calculations, the nutritional value of the food served in October met the one third requirement in all of the food nutrients except the calories for the seventh to ninth grades and tenth to twelfth grades; niacin for the fourth to sixth grades and tenth to twelfth grades; ascorbic acid for the fourth to sixth and tenth to twelfth grades; and iron for the seventh to ninth grades. In addition, plate waste resulted in the tenth to twelfth grades being low in calcium and the first to third grades being low in niacin. April's nutrients were adequate in all except the calories for the tenth to twelfth grades and vitamin A for the first to third grades and tenth to twelfth grades.²⁰ "The average percentage of waste per person in this study was seven per cent."²¹

The writer investigated the studies reviewed in order to pull from each of them bits of information which would give a better under-

18. Mabel Adelia Boren, A Plate Waste Study Made in a Small Type "A" Lunchroom. Master's Thesis, Collinsville, Texas: Texas State Teachers College, 1948. 128 pp.

19. Ibid., p. 29.

20. Ibid., pp. 24-27.

21. Ibid., p. 30.

standing of various phases of the present study. None of them were directly related to the main purpose of the study, but parts of each pertained to some section of the thesis in which a somewhat similar problem was involved.

CHAPTER III

RESULTS AND ANALYSES

This study was planned to evaluate the school lunch menus at the Curry Demonstration School of the Woman's College of the University of North Carolina primarily by means of a check list including a selected group of factors to consider in planning adequate and attractive school lunch menus which can be prepared with economical use of time, labor, and money.

Students of all grades and faculty members who ate the plate lunch were the subjects. In the case of adequacy of the plate lunches, only those who ate the large plate lunch were included since the standards are stated in terms of the requirement for this age group.

It was decided that a month, or twenty school days, would be used for the collection of data. Since the last week of March extended into the Spring holidays, the decision was to begin the study on the last day of February which occurred on a Monday. Thus February twenty-eighth to March twenty-fifth, 1949, was the selected period.

Immediately menus were planned for a month in advance, based on recipes especially standardized by the writer for Curry Cafeteria during the early fall of 1948 and similar in nature to those previously served (pp. 12 to 13). Effort was exerted to keep the study as realistic as possible, free from unusual menus which would be used only for the duration of the study. Each week's menus were checked and agreed upon by both the dietitian of Curry School Cafeteria and the chairman of the Institution Administration Division of the Department of Home Economics

CURRY DEMONSTRATION SCHOOL MENUS

Monday February 28:

Baked Luncheon Loaf
Glazed Sweet Potatoes
Cabbage-Pepper Salad
Buttered Roll
Raisin Cobbler
Milk

Monday March 7:

Ham Salad
Buttered Potatoes
Green Peas
Buttered Whole Wheat Bread
Apple Cobbler
Milk

Tuesday March 1:

Corned Beef Hash
Buttered Corn
Mixed Vegetable Salad
Buttered Whole Wheat Bread
Applesauce
Milk

Tuesday March 8:

Hamburger Patties, Gravy
Mashed Potatoes
Cole Slaw
Buttered Roll
Prune Plums
Milk

Wednesday March 2:

Fish Patties
Buttered Potatoes
Carrots-Raisin Salad
Cornbread
Dried Peaches
Milk

Wednesday March 9:

Braised Liver
Buttered Corn
Shredded Lettuce
Buttered Whole Wheat Bread
Spiced Peaches
Milk

Thursday March 3:

Meat Loaf, Gravy
Mashed Potatoes
Green Peas
Buttered Roll
Gingerbread
Milk

Thursday March 10:

Baked Beans
Buttered Kale
Carrots-Raisin Salad
Buttered Roll
Spice Cake
Milk

Friday, March 4:

Franks au Gratin
Baked Potato
Cabbage-Apple Salad
Buttered Whole Wheat Bread
Chocolate Pudding
Milk

Friday March 11:

Salmon Loaf
Creamed Potatoes
Buttered Carrots
Cornbread
Lemon Custard
Milk

CURRY DEMONSTRATION SCHOOL MENUS, Continued

Monday March 14:

Egg Salad
Baked Potato
Fruit-Vegetable Salad
Buttered Whole Wheat Bread
Plain Cake with Orange Sauce
Milk

Monday March 21:

Creamed Salmon
Buttered Corn
Mixed Vegetable Salad
Buttered Roll
Apple
Milk

Tuesday March 15:

Baked Fish
Escalloped Potatoes
Buttered Beets
Cornbread
Lemon Pie
Milk

Tuesday March 22:

Meat Loaf, Gravy
Mashed Potatoes
Green Peas
Cornbread
Fruit Gelatin
Milk

Wednesday March 16:

Swedish Meat Balls, Gravy
Mashed Potatoes
Green Peas
Buttered Roll
Glazed Apples
Milk

Wednesday March 23:

Ham-Egg Casserole
Glazed Sweet Potatoes
Green Beans
Buttered Whole Wheat Bread
Dried Peach Cobbler
Milk

Thursday March 17:

Hot Roast Beef Sandwich, Gravy
Glazed Sweet Potatoes
Cabbage-Pepper Salad
Buttered Whole Wheat Bread
Fruit Compote
Milk

Thursday March 24:

Beef Stew
Buttered Potatoes
Cole Slaw
Buttered Roll
Orange
Milk

Friday March 18:

Liver Loaf, Gravy
Buttered Potatoes
Carrots-Raisin Salad
Cornbread
Fruit Bars
Milk

Friday March 25:

Hot Roast Pork Sandwich
Baked Sweet Potatoes
Buttered Kale
Buttered Whole Wheat Bread
Steamed Prunes
Milk

of Woman's College.

Variety in Foods Served

Each week's menus were checked carefully in advance of serving by means of a check list, "Variety in Foods Served", to determine (1) whether there was sufficient variety in the menus from day to day and from week to week and (2) if any item appeared more than once on the same day of the week; that is, for example, if salmon loaf appeared on Friday of each week.

Only one meat, one of the children's favorites, was repeated partly because of a request of a group of the children (pp. 15 to 16). This item was meat loaf, served once during the first week on Thursday and again during the fourth week on Tuesday.

No starchy/food or main vegetable was repeated more than four times. Buttered potatoes and mashed potatoes were repeated four times, buttered corn and glazed sweet potatoes were repeated three times, baked potatoes were repeated twice, and buttered kale, creamed potatoes, scalloped potatoes, and baked sweet potatoes were used only once. The only starchy food occurring twice on the same day of different weeks was mashed potatoes which were served on Tuesday of the second and fourth weeks. By more careful planning this repetition could have been avoided. Irish potatoes were available at a very low price. For this reason and because potatoes were so well liked in this particular school, they were served often but in as many different forms as possible. The best liked recipes were repeated more often in an attempt to minimize waste.

As for the other vegetable and/or fruit, green peas were repeated four times and seven dishes were not repeated. None were repeated on the

VARIETY IN FOODS SERVED, Continued

Foods to be served	Days served														
	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F
Other vegetable and/or fruit	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Beets, buttered	:	:	:	:	:	:	:	:	:	X	:	:	:	:	:
Cabbage-apple salad	:	:	:	:	X	:	:	:	:	:	:	:	:	:	:
Cabbage-pepper salad	X	:	:	:	:	:	:	:	:	:	X	:	:	:	:
Carrots, buttered	:	:	:	:	:	:	:	:	:	X	:	:	:	:	:
Carrots-raisin salad	:	:	X	:	:	:	:	X	:	:	:	X	:	:	:
Cole slaw	:	:	:	:	:	X	:	:	:	:	:	:	:	:	X
Fruit-vegetable salad	:	:	:	:	:	:	:	:	:	X	:	:	:	:	:
Green beans	:	:	:	:	:	:	:	:	:	:	:	:	:	X	:
Green peas	:	:	:	X	X	:	:	:	:	X	:	:	X	:	:
Kale, buttered	:	:	:	:	:	:	:	:	:	:	:	:	:	:	X
Lettuce, shredded	:	:	:	:	:	:	X	:	:	:	:	:	:	:	:
Vegetable salad, mixed	:	X	:	:	:	:	:	:	:	:	:	:	X	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Bread	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Cornbread	:	:	X	:	:	:	:	:	X	X	:	X	X	:	:
Rolls, buttered Parker House	X	:	:	X	:	:	X	X	:	:	X	:	X	:	X
Whole wheat bread, buttered	:	X	:	:	X	X	:	X	:	:	X	:	:	:	X
Dessert	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Apple, fresh whole	:	:	:	:	:	:	:	:	:	:	:	:	X	:	:
Apple cobbler	:	:	:	:	X	:	:	:	:	:	:	:	:	:	:
Apples, glazed	:	:	:	:	:	:	:	:	:	:	X	:	:	:	:
Applesauce	:	X	:	:	:	:	:	:	:	:	:	:	:	:	:
Cake, plain with orange sauce	:	:	:	:	:	:	:	:	:	X	:	:	:	:	:
Cake, spice	:	:	:	:	:	:	:	:	:	X	:	:	:	:	:
Chocolate pudding	:	:	:	:	X	:	:	:	:	:	:	:	:	:	:
Fruit bars	:	:	:	:	:	:	:	:	:	:	:	:	X	:	:
Fruit compote	:	:	:	:	:	:	:	:	:	:	:	:	X	:	:
Fruit gelatin	:	:	:	:	:	:	:	:	:	:	:	:	:	X	:
Gingerbread	:	:	:	X	:	:	:	:	:	:	:	:	:	:	:
Lemon custard	:	:	:	:	:	:	:	:	:	X	:	:	:	:	:
Lemon pie	:	:	:	:	:	:	:	:	:	:	X	:	:	:	:
Orange	:	:	:	:	:	:	:	:	:	:	:	:	:	:	X
Peach cobbler, dried	:	:	:	:	:	:	:	:	:	:	:	:	:	X	:
Peaches, dried	:	:	X	:	:	:	:	:	:	:	:	:	:	:	:
Peaches, spiced	:	:	:	:	:	:	X	:	:	:	:	:	:	:	:
Prune plums	:	:	:	:	:	:	X	:	:	:	:	:	:	:	:
Prunes, steamed	:	:	:	:	:	:	:	:	:	:	:	:	:	:	X
Raisin cobbler	X	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

same day of the week. Wider variety in this group could be possible in that the children could be taught, gradually and over a long period of time, to like more types and varieties of foods.

The breads were selected to fit in with the other items on the menu. There was variety from day to day, except for one occasion where the week-end separated the two consecutive days. However, there was variety on days from one week to another. With the kitchen set-up and the volume of business at the time of the study, it had seemed feasible to limit the service of breads to three. It was cheaper to purchase ready-baked rolls and loaf bread than to make them and much less time-consuming; but the cornbread, made from enriched cornmeal and flour, was baked in the cafeteria kitchen.

The desserts were not repeated on any day.

The beverage was always milk. It is believed by most nutritionists that since each child needs a quart of milk per day, it is doubtful that he will get that much unless he drinks at least one glassful at lunch. Thus milk was the only beverage sold in the Curry Cafeteria unless, occasionally in warm weather, fruit juice was served as an appetizer with the plate lunch with which milk was included. Since there was no possible chance for variety, milk was excluded from the check list.

Evaluation of Menus

Many factors enter into menu planning--appearance, adequacy, time, labor, and money. Since menu planning is one of the most difficult tasks of many dietitians, it was believed that a check list would be of assistance in menu-making. Therefore the "Check List for Evaluation of School Lunch Menus" was developed (pp. 18 to 19). It was used in this

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served					
Harmony, contrast,						
variety, balance						
Color						
Green						
Purple						
Tan-brown						
White-cream						
Yellow-red						
Flavor						
Bland						
Salty						
Strong						
Sweet						
Tart						
Form, A. P.						
Baked						
Canned						
Dried						
Fresh						
Cooked						
Uncooked						
Frozen						
Shape						
Fluid						
Mixed						
Mound, round,						
whole, square						
Stripped, diced,						
shredded, grated,						
in pieces						
Texture						
Coarse						
Crisp						
Firm						
Fluid						
Smooth						
Soft						
Method of preparation						
Baked, broiled, fried						
Creamed						
Raw						
Steamed, stewed,						
boiled						
Used as purchased						
Warmed						

study as a means of checking the twenty menus as to appearance, method of preparation, division of labor, time served, and adequacy. Cost will be discussed later.

Attractiveness

From the psychological standpoint, menus must be attractive and appealing to the patron--even to a small first grader. Thus a good menu must meet the aesthetic requirements of harmony, contrast, variety, and balance in the characteristics of color, flavor, form (A. P.), shape, and texture.

Variety in the twenty menus

Of the four aesthetic requirements, variety is the only one that can be objectively studied directly on the check list. It is tangible enough that personal opinion does not have to enter in order for one to judge it. Each menu was checked on variety in each of the five food characteristics.

Color.--Five colors included all foods served during the twenty days of the study. They were:

Green: all green vegetables, leafy or otherwise, as green beans, lettuce, cabbage.

Purple: all purple foods, as prunes and plums.

Tan-brown: all foods of this color throughout or those which have been browned on the exterior, as rolls, bread, plain cake, chocolate pudding.

White-cream: all foods of this color throughout, as milk, mashed potatoes.

Yellow-red: all yellow, orange, pink, red foods, as sweet potatoes, corn, beets.

Of the twenty menus, 60 per cent had four colors, 35 per cent had three colors, and 5 per cent had as many as five colors, indicating that

there was variety of color in the dishes served (Table I). As for the particular colors used, 100 per cent of the menus included the neutral colors of white-cream and tan-brown whereas only 80 per cent included green and yellow-red foods (Table II). Only 10 per cent of the menus had purple on them. These results are as one would expect since bread of the tan-brown group and milk of the white-cream group were included daily. Very few foods are purple in color.

Seven of the menus received critical comments from the committee of six judges as to the aesthetic requirements of harmony, contrast, and balance in color (pp. 122 to 128).

Flavor.--Five flavors appeared throughout the study. They were:

Bland: mild, neutral, opposite of strong, not penetrating, nothing outstanding, soothing. Examples: buttered beets, milk, breads.

Salty: especially characteristic of meats because of their relatively high content of sodium chloride; also foods highly seasoned with salt. Examples: hamburger patties, egg salad, meat loaf.

Strong: strong-flavored vegetables. Examples: cabbage, kraut, cauliflower, turnips, and kale--partially because of its strong odor.

Sweet: foods either containing natural forms of sugars or those to which dextrose or honey has been added. Examples: whole apple, glazed sweet potatoes, cake.

Tart: sharp or sour foods. Examples: lemon pie, lemon custard.

No menu had as many as five flavors, but 65 per cent had three flavors, and 35 per cent had four flavors. Thus there was variety in flavor among the twenty menus. As to the particular flavors used, 100 per cent included at least one bland flavor, 85 per cent included a salty flavor, and 80 per cent had a sweet flavor. Only 55 per cent of the menus had a strong flavor, and 15 per cent included a tart flavor.

TABLE I
 VARIETY IN SCHOOL LUNCH MENUS AS EXPRESSED THROUGH THE NUMBER
 OF COLORS, FLAVORS, FORMS, SHAPES, AND TEXTURES USED

Number of	Number of menus	Per cent of menus
Colors		
5	1	5
4	12	60
3	7	35
2	-	-
1	-	-
Flavors		
5	-	-
4	7	35
3	13	65
2	-	-
1	-	-
Forms, A. P.		
6	1	5
5	6	30
4	8	40
3	5	25
2	-	-
1	-	-
Shapes		
4	5	25
3	15	75
2	-	-
1	-	-
Textures		
6	3	15
5	6	30
4	9	45
3	2	10
2	-	-
1	-	-

TABLE II
 VARIETY IN SCHOOL LUNCH MENUS AS EXPRESSED THROUGH THE PARTICULAR
 COLORS, FLAVORS, FORMS, SHAPES, AND TEXTURES USED

Factors to consider	Menus	
	Number	Per cent
Color		
Green	16	80
Purple	2	10
Tan-brown	20	100
White-cream	20	100
Yellow-red	16	80
Flavor		
Bland	20	100
Salty	17	85
Strong	11	55
Sweet	16	80
Tart	3	15
Form, A. P.		
Baked	15	75
Canned	14	70
Dried	11	55
Fresh		
Cooked	19	95
Uncooked	20	100
Frozen	3	15
Shape		
Fluid	20	100
Mixed	8	40
Mound, round, whole, square	20	100
Stripped, diced, shredded, grated, in pieces	17	85
Texture		
Coarse	18	90
Crisp	4	20
Firm	18	90
Fluid	20	100
Smooth	20	100
Soft	10	50

Generally, children are served simple foods in their natural flavors with relatively few strong or tart flavored foods. Since the cafeteria management endeavored to keep this fact in mind while planning menus, the percentage dropped in these two groups.

Eight of the menus received criticisms or suggestions from the committee of six judges as to harmony, contrast, and balance in flavor (pp. 122 to 128).

Form, A. P.--It was also decided that the form in which each food was purchased might have some influence on the aesthetic appearance of the food. Thus the forms, A. P. (As Purchased) chosen were:

Baked: any food purchased in its baked form, such as whole wheat bread and Parker House Rolls.

Canned: meats, fruits, and vegetables processed and preserved by the canning method, such as salmon, beets, and prune plums.

Dried: foods preserved by dehydration, such as raisins and dried peaches.

Fresh, Cooked: those foods cooked before serving, such as flour, sugar, mixes, and fresh fruits and vegetables--carrots, apples, sweet potatoes. Staples are included in this group, for although they are dry, they are not classified as the dehydrated ones above.

Fresh, Uncooked: foods served without cooking or further processing, such as oranges, milk, lettuce.

Frozen: foods cleaned and frozen for preservative purposes. These foods may or may not require cooking, such as kale, fish, apricots.

Numerous forms of foods were used. As many as 40 per cent of the menus used four forms, 30 per cent used five forms, and 25 per cent used three forms. Only 5 per cent included as many as six forms. Thus there was adequate variety as to the number of forms. As to the particular form used, 100 per cent of the menus included a fresh, uncooked form, and

95 per cent had a fresh, cooked form. Exactly 75 per cent included something baked, due to the fact that two out of three kinds of breads served in the cafeteria were purchased from a bakery; for the other bread, raw ingredients were purchased. Of the twenty menus, 70 per cent included food of the canned form and 55 per cent, of the dried. Frozen foods were used infrequently; only 15 per cent of the menus included any, because they were more expensive. The few which were used were fish and leafy green vegetables, for these two were not readily available in other forms.

Only three of the menus received suggestions or remarks from the committee of six judges on harmony, contrast, and balance in form (pp. 122 to 128).

Shape.--In the case of shape, each dish on the menu was either checked on the check list or marked with a descriptive word. Some of the dishes required only one check or mark, but in some instances a dish received two checks, two descriptive words, or perhaps one of each. The shapes were:

Fluid: any food without shape. Liquid. Examples: milk, creamed salmon.

Mixed: foods having more than one shape, perhaps a mixture of square and round shapes as in the case of mixed carrots and peas. Examples: carrots-raisin salad or mixed vegetable salad.

Mound, round, whole, square were combined since they are all of one piece. For clarity to the reader and the dietitian concerned, each dish was marked with a specific word instead of a check mark, as for mashed potatoes: "mound".

Mound: food served from a scoop, such as mashed potatoes, egg salad.

Round: round as an orange or a meat ball; or flat but round, such as a cookie or meat pattie.

Whole: an entire slice or a whole piece of food, such as a slice of liver or beef or a whole potato or roll.

Square: square or rectangular, such as a portion of fruit gelatin, serving of cobbler, or square slices of bread cut diagonally.

Stripped, diced, shredded, grated, in pieces were combined because they are similar in that each portion is the same throughout. Yet, within each serving there are many small pieces of like shape.

Stripped: coarser than shredded. Long strips, such as carrot or celery strips.

Diced: tiny squares, cubed foods, such as diced potatoes or carrots.

Shredded: cut in slender shreds, such as shredded cabbage or lettuce.

Grated: finer than shredded, such as grated cheese or carrots.

In Pieces: cut in shapes other than those mentioned above, such as sliced beets, cut green beans; also those foods small in size by nature, as green peas or buttered corn.

There was definite variety in shape, for 75 per cent of the menus had at least three shapes, and 25 per cent had four shapes. As for the particular shapes included, 100 per cent of the menus had foods in both the "fluid" and "mound, round, whole, square" groups. As many as 85 per cent included foods either "stripped, diced, shredded, grated, or in pieces". Only 40 per cent of the menus contained "mixed" shapes, partly due to the fact that dislike of mixed foods was an idiosyncrasy of the subjects of the study.

The committee of six judges offered comments on seven of the menus as to harmony, contrast, and balance in shape (pp. 122 to 128).

Texture.--Texture was rather difficult to standardize. For the purpose of this study, a committee determined six types to be used.

They were:

Coarse: foods in which cellulose or roughage was evident. Examples: corn, cornbread, raw salad, green beans, raisins, orange, ham salad, pickle.

Crisp: pie crust, toast.

Firm: foods which held their shape well. Examples: meats, peas, baked beans, gelatin, carrots, plums, peaches, fruit bar, prunes, apple.

Smooth: foods which were mashed or sieved; and breads from which the rough bran had been removed. Other examples: potatoes, cakes.

Soft: foods which were creamed; also stewed foods which no longer held their shape well; hash.

In general, there was variety in texture. Of the twenty menus, 45 per cent had as many as four textures, 30 per cent had five textures, and 15 per cent had the maximum of six. Only 10 per cent of the menus ranged below these and even they had as many as three textures. As to the particular textures used, 100 per cent of the menus had fluid and smooth foods, for in these two groups fall the starchy vegetables, most breads, and milk. Exactly 90 per cent of the menus included firm and coarse foods, and 50 per cent had soft textures. Only 20 per cent of the menus had crisp foods, because only pie crust and toast were included as crisp, and not raw salads as might be expected. All raw salads were classified as coarse foods.

Ten of the menus were criticized by the committee of six judges as to harmony, contrast, and balance in texture (pp. 122 to 128).

Harmony, contrast, and balance in the twenty menus

Three other aesthetic requirements of the well-planned menu remain to be discussed--harmony, contrast, and balance. These could not be checked on the check list because of the fact that they are not objective requirements. Personal opinion entered into the checking of the

menus to such an extent that the writer had to resort to other methods of judging.

Comments on individual menus by a committee.--A committee of qualified judges was designated to study the menus and to give, to the best of their ability, an unbiased opinion as to the extent the menus met the requirements of harmony, contrast, and balance in color, flavor, form (A. P.), shape, and texture. The committee members were:

1. Miss Margaret M. Edwards, Professor, Head of the Department of Home Economics
2. Miss Evelyn L. Howell, Associate Professor, Chairman, Foods and Nutrition Division
3. Miss Evelyn Cox, Assistant Professor, Foods and Nutrition Division
4. Mrs. Helen Surratt, Assistant Professor, Foods and Nutrition Division
5. Miss Sarah Sherrill, Graduate Assistant, Home Management House
6. Miss Jeannie James, Graduate Student in Home Economics

The numbers which occur just before each name serve as a means of identification. After each comment on the individual menus (Appendix B, pp. 122 to 128), a number will appear, indicating the person who made the remark.

The four menus which received no adverse criticism were:

March 1, 1949
 Corned Beef Hash
 Buttered Corn
 Mixed Vegetable Salad
 Buttered Whole Wheat Bread
 Applesauce
 Milk

March 14, 1949

Egg Salad
Baked Potato
Fruit-Vegetable Salad
Buttered Whole Wheat Bread
Plain Cake with Orange Sauce
Milk

March 17, 1949

Hot Roast Beef Sandwich, Gravy
Glazed Sweet Potatoes
Cabbage-Pepper Salad
Buttered Whole Wheat Bread
Fruit Compote
Milk

March 24, 1949

Beef Stew
Buttered Potatoes
Cole Slaw
Buttered Roll
Orange
Milk

One person did ask if the mixed vegetable salad served on March 1 was cooked or raw. The salad was raw; thus the menu met with approval.

Two menus received one critical comment each. They were:

March 8, 1949

Hamburger Patties, Gravy
Mashed Potatoes
Cole Slaw
Buttered Roll
Prune Plums
Milk

Comments:

Color - Fair in harmony, contrast, and balance. 4

March 15, 1949

Baked Fish
Escalloped Potatoes
Buttered Beets
Cornbread
Lemon Pie
Milk

Comments:

Texture - Lacks contrast. 3

Of the twenty menus judged, as many as six received two criticisms each. They were:

February 28, 1949

Baked Luncheon Loaf
Glazed Sweet Potatoes
Cabbage-Pepper Salad
Buttered Roll
Raisin Cobbler
Milk

Comments:

Flavor - Too sweet; 1
too heavy, add lighter
dessert, such as
applesauce. 1
Shape - One judge said,
"good if potato whole
rather than cut",
which it was. 4

March 4, 1949

Franks au Gratin
Baked Potato
Cabbage-Apple Salad
Buttered Whole Wheat
Bread
Chocolate Pudding
Milk

Comments:

Texture - Lacks con-
trast and balance.
Dry. 5
Lacks contrast. 6

March 9, 1949

Braised Liver
Buttered Corn
Shredded Lettuce
Buttered Whole Wheat
Bread
Spiced Peaches
Milk

Comments:

Color - Lacks contrast. 3
Shape - Lacks contrast.
Too little balance. 5

March 18, 1949

Liver Loaf, Gravy
Buttered Potatoes
Carrots-Raisin Salad
Cornbread
Fruit Bars
Milk

Comments:

Flavor - Lack of harmony.
Substitute roll for
cornbread. 1
Lack of harmony. Liver
and raisins not too
"chummy". 2

March 21, 1949

Creamed Salmon
Buttered Corn
Mixed Vegetable Salad
Buttered Roll
Apple
Milk

Comments:

Color - Lacks contrast. 3
Texture - Lacks con-
trast. Use baked potato
rather than corn, and
cornbread instead of a
roll. 1

March 23, 1949

Ham-Egg Casserole
Glazed Sweet Potatoes
Green Beans
Buttered Whole Wheat
Bread
Dried Peach Cobbler
Milk

Comments:

Texture - Fair in har-
mony, contrast, and
balance. 4
Lack of contrast. 6

Four menus received three adverse criticisms. They were:

March 10, 1949

Baked Beans
Buttered Kale
Carrots-Raisin Salad
Buttered Roll
Spice Cake
Milk

Comments:

Color - Lacks harmony and contrast. Use apple salad instead of carrot salad. 1
Flavor - Lacks harmony. Beans and kale (strong) not too "chummy". 2
Shape - Lacks harmony. 6

March 16, 1949

Swedish Meat Balls,
Gravy
Mashed Potatoes
Green Peas
Buttered Roll
Glazed Apples
Milk

Comments:

Texture - Lacks contrast. Substitute carrot-green pepper salad for peas. 1
Lacks contrast. Peas and potatoes soft. No succulent vegetable. 2
Lacks contrast. Raw leafy vegetable would help. 4

March 22, 1949

Meat Loaf, Gravy
Mashed Potatoes
Green Peas
Cornbread
Fruit Gelatin
Milk

Comments:

Flavor - Lacks contrast. Use tomato sauce instead of gravy. 1
Texture - Lacks contrast. Soft peas and potatoes. 2
Fair in texture. 4

March 25, 1949

Hot Roast Pork
Sandwich
Baked Sweet Potatoes
Buttered Kale
Buttered Whole Wheat
Bread
Steamed Prunes
Milk

Comments:

Flavor - Lack of harmony. Use orange instead of the prunes. 1
Lack of harmony. The prunes and kale not too "chummy". 2
Texture - Lacks contrast. 3

Of the menus used during the four weeks of the study, none received four comments.

Only one menu received five criticisms. It was:

March 7, 1949

Ham Salad
Buttered Potatoes
Green Peas
Buttered Whole Wheat
Bread
Apple Cobbler
Milk

Comments:

Flavor - Lacks contrast.
Peas and potatoes
bland. 2
Form - Fair in form. 4
Shape - Lacks con-
trast. Too round. 4
Texture - Lacks con-
trast. Add crisp salad
or dessert. 1
Lacks balance. No
succulent vegetable. 2

Two menus received as many as six comments from the committee.

They were:

March 3, 1949

Meat Loaf, Gravy
Mashed Potatoes
Green Peas
Buttered Roll
Gingerbread
Milk

Comments:

Color - Fair in harmony,
contrast, and balance. 4
Flavor - Lacks contrast.
Too bland. 5
Shape - Lacks contrast. 4
Texture - Lacks contrast.
Add carrot strips. 1
Lacks contrast; peas
and potatoes soft;
lacks balance: no succu-
lent vegetable. 2
Lacks contrast. Add
something crisp, such as
a hard roll. 3

March 11, 1949

Salmon Loaf
Creamed Potatoes
Buttered Carrots
Cornbread
Lemon Custard
Milk

Comments:

Color - Lacks contrast.
Salmon and carrots quite
alike. 2
Lacks contrast. 3
Form - Lacks contrast
and balance. All
cooked. 5
Shape - Lacks harmony. 6
Texture - Lacks con-
trast. Use cole slaw
rather than carrots. 1
Lacks contrast. 3

Finally, only one menu of the twenty received as many as seven
adverse criticisms. It was:

March 2, 1949

Fish Patties
Buttered Potatoes
Carrots-Raisin Salad
Cornbread
Dried Peaches
Milk

Comments:

Color - Lacks contrast.
Add lettuce. Substitute dried prunes. 1
Color monotonous. Too white and yellow. 2
Lacks contrast. 3
Too much yellow. 5
Lack of contrast. 6
Flavor - Lack of contrast. Too bland. 5
Shape - All round shapes. 3

One question which came up several times in connection with the judging, but not recorded on the chart in Appendix B, was whether or not stews served at Curry contained potatoes. The potatoes were always served as a separate item on the menu.

Rating of twenty menus by one judge.--Originally, the committee chosen to judge the three aesthetic requirements of menus consisted of seven members. One person, however, chose to rank the menus as to "excellent", represented by the number "four"; "good", represented by the number "three"; "average", represented by the number "two"; and "fair", represented by the number "one". This person was Miss Ellen Penn, Professor, Chairman, Institution Administration Division.

As a whole, the menus rated highest on texture and shape (Table III). As for texture, 90 per cent of the menus rated "excellent" or "good" in harmony, 70 per cent in contrast, and 60 per cent in balance. As for shape, four fifths of the menus rated "excellent" or "good" in harmony and three fifths in contrast and balance. The next two characteristics, according to the order of rank, were flavor and form, A. P. Three fourths of the menus rated "excellent" or "good" in harmony of flavor and about one half in both contrast and balance of flavor. As for the form, A. P., three fourths rated "excellent" or "good" in harmony, one half in

TABLE III

RATING OF MENUS AS TO HARMONY, CONTRAST, AND BALANCE

(Twenty menus served in the Curry Demonstration School Cafeteria,
Woman's College of the University of North Carolina)

Characteristics	Harmony	Contrast	Balance
Color			
Excellent	9	4	6
Good	3	6	4
Average	7	5	4
Fair	1	5	6
Flavor			
Excellent	5	3	3
Good	10	8	8
Average	5	7	5
Fair	-	2	4
Form, A. P.			
Excellent	5	2	1
Good	10	8	8
Average	4	9	7
Fair	1	1	4
Shape			
Excellent	10	5	5
Good	6	7	7
Average	4	7	7
Fair	-	1	1
Texture			
Excellent	9	4	4
Good	9	10	8
Average	2	4	5
Fair	-	2	3

contrast, and slightly less than one half in balance. (Since this particular form is the "As Purchased" form, its value as to rating by the judge is of less importance than the other four characteristics because of the fact that the form of a food is often changed during the preparation period. It was included on the check list primarily for the dietitian's use in food selection. Often by choosing various foods in the A. P. form, one can minimize certain food costs.) Apparently color rated the lowest of the five characteristics with only 60 per cent of the menus rating "excellent" or "good" in harmony and one half in both contrast and balance.

Further evidence of attractiveness will be presented under Food Waste (pp. 53 to 58).

Method of Preparation

The method of preparation has a definite influence on appetite appeal. For instance, a plateful of creamed foods with spoonbread would not be too enticing, nor would a combination of fried foods. In contrast, a baked food with a heavier fried food plus a light raw salad and warm rolls would be rather appetizing in most cases.

Secondly, from the functional aspect of the menus the method of preparation has a major influence. For example, a menu of all baked foods may result in an over-crowded or over-flowing oven. Likewise, a menu containing all steamed foods puts too heavy a load on the steam-jacketed kettles (or as in the case of this cafeteria kitchen at the time of the study, the one kettle). With a properly balanced distribution of methods of preparation, the various dishes can be prepared without hardship on either equipment or personnel.

Thus each dish was either checked on the check list or marked with a descriptive word. As the case might warrant, each dish was checked or marked once or twice; for example, glazed sweet potatoes required two processings--steaming and baking; and peach cobblers likewise required handling twice--stewing and baking. The methods of preparation were:

Baked: any food baked in an oven, as baked fish, baked beans.

Broiled: any food cooked by direct heat, either over or under a clear flame, as steak, chops.

Fried: foods cooked in a small amount of fat (sautéd), either in lard or vegetable shortening, as liver, Swedish meat balls.

Creamed: any food combined with a white sauce, as corned beef hash, creamed salmon.

Raw: a food served without cooking, as cole slaw, whole apple.

Steamed: foods cooked in steam-jacketed kettle by means of live steam, as buttered potatoes, kale.

Stewed: foods simmered or boiled in a small amount of liquid, as dried apples or prunes.

Boiled: foods heated to boiling point or above; cooked in liquid in which the bubbles are breaking on the surface; cooked only until tender, yet firm, as green peas, canned beets.

Used as purchased: foods previously processed; requiring no further preparation, as milk, whole wheat bread.

Warmed: pre-cooked foods requiring only warming on the steam table a short time before serving, as the baked rolls.

Of the menus used in the study, 55 per cent required at least four methods of preparation, and 30 per cent included as many as five of the possible six methods (Table IV). Only 15 per cent required as few as three methods.

TABLE IV

VARIETY IN SCHOOL LUNCH MENUS AS EXPRESSED THROUGH THE NUMBER
OF METHODS OF PREPARATION USED

Number of methods of preparation	Number of menus	Per cent of menus
6	-	-
5	6	30
4	11	55
3	3	15
2	-	-
1	-	-

As to the particular methods of preparation used, 100 per cent of the menus had foods which were "steamed, stewed, or boiled" and "used as purchased" (Table V). As many as 85 per cent had foods "baked, broiled, or fried", and 60 per cent had raw foods. Warmed foods were included in only 40 per cent of the menus since rolls, one of the three breads served, was the only food prepared in such a fashion. Because creamed foods are unpopular with the patrons of Curry School Cafeteria, only 30 per cent of the menus included them.

TABLE V

VARIETY IN SCHOOL LUNCH MENUS AS EXPRESSED THROUGH THE PARTICULAR
METHODS OF PREPARATION USED

Methods of preparation	Menus	
	Number	Per cent
Baked, broiled, fried	17	85
Creamed	6	30
Raw	12	60
Steamed, stewed, boiled	20	100
Used as purchased	20	100
Warmed	8	40

Evidently, there was enough variety in the methods of preparation to provide interest and to prevent any unnecessary over-flow on any piece of equipment.

Distribution among Employees

The menus must not be so complicated or one-sided that one person has to do all the preparation. For best results, the work should be well distributed among all employees in order that no one will be rushed. Thus each dish was checked according to the person responsible for its preparation for service.

The work was evenly divided among the head cook and the assistant cook, for at the end of the twenty days of work, the head cook had handled a total of fifty-five dishes whereas the assistant cook had done fifty-three (Table VI). The dishwasher and general helper, as indicated from his title, is responsible for very little food preparation; in fact, only the peeling of potatoes as a rule. Thus the total number of dishes which he handled was ten.

From the daily standpoint, especially on the twelfth day when the head cook had four processes to the assistant cook's two, the number of dishes each employee prepared did not appear well distributed. As a matter of fact, both cooks had other individual dishes, not included on the plate lunch, for which they were responsible. On this day the assistant cook had more other responsibilities than the head cook. Likewise the dishwasher had other tasks for which he was responsible when his time was not consumed by the preparation of vegetables.

At the end of five days observation on each worker (to be discussed in full later), all three workers appeared to be busy most of the time.

TABLE VI
ASSIGNMENT OF PREPARATION OF DISHES TO EMPLOYEES

Employee	Number dishes each employee prepared																		Total		
	daily																				
	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W		T	F
Head cook	3	2	3	3	2	4	2	2	3	3	3	4	3	2	3	2	3	3	2	3	55
Assistant cook	3	3	2	2	3	3	3	3	3	2	4	2	2	3	2	3	2	3	3	2	53
Dishwasher and general helper	0	0	1	1	0	1	1	0	0	1	0	0	1	0	1	0	1	0	1	1	10

Time of Serving

Up to this point, the check list was checked in advance of preparation. But from here on each dish was checked after preparation.

Time enters into the total picture of menu planning. A menu can be only as complicated as the time of preparation permits. Provided the workers wasted no time and had their work planned to best advantage, the time the finished product comes out is an indication of whether the menu was planned properly.

At the time of the study, all food was supposed to be on the steam table for service promptly at 11:20 A. M. If, for any reason, the dish was late, the number of minutes it was late was recorded.

During the period of twenty school days only eight dishes were late (Table VII). One dish, raisin cobbler, was ten minutes late the first day. Since it was the dessert, it was ready for the children by the time they had consumed their first course. Thus the cafeteria line was not delayed that particular day. Lemon pie, late five minutes on the twelfth day, again did not delay the line. The remainder of the late foods were: ham-egg casserole, late three minutes; cornbread, plain

cake with orange sauce, and escalloped potatoes, each late two minutes; and mashed potatoes and egg salad, each late one minute. In general, the fact that a very few of the dishes were served late indicates that the menus were planned to be prepared within the allotted time.

For the benefit of those who might present the question of the possibility that the food would be ready too far ahead of time, the work schedule of the Curry Cafeteria allowed only three hours and fifteen minutes for the total preparation time. In this particular situation, the tendency was to be late, rather than to complete the preparation too far in advance.

TABLE VII

TIME FOOD WAS SERVED

[illegible]

Adequacy

Malnutrition, traced primarily to poor food habits and certainly a major problem of today, should be carefully guarded against in the school cafeterias and lunchrooms. The United States government evidenced an awareness of the situation by passing the National School Lunch Act¹ which afforded a school lunch program for children of the low-income brackets.

Comparison of size of servings with requirements made by the National School Lunch Act

In checking the adequacy of the twenty menus in this study some basis for determining adequacy had to be selected. Due to the fact that the Curry School Cafeteria's funds were not supplemented by the government, the cafeteria management was not under the jurisdiction of the Lunch Act. Yet after having seen the descriptions of the Type A and Type B lunch patterns set up under the Act to be used by the public schools according to the amount of reimbursement from the government, it was believed that the menus at Curry most nearly corresponded to the Type A lunch, which provides one-third to one-half of a day's nutritive requirements. This type of lunch has been set up on the basis of tested research as a minimum for school children² and receives the maximum amount of federal aid. The writer agrees that Type A should be served to each child if the finances permit; otherwise, supplementary foods

1. Jean J. Stewart and Alice L. Edwards, Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

2. North Carolina Department of Public Instruction. School Lunch Program. School Lunch Bulletin, Vol. 6. Raleigh, N. C.: (The Department), 1948-1949, p. 15.

should be brought from home.

On the Type A lunch, "the quantities of food specified are based on typical food needs of children 10 to 12 years of age, but with adjustments for energy requirements they are suitable for children of other ages".³ Actually, two priced plate lunches were served to the Curry children of varying ages. (a) The twenty-five cents plate was served to children from the kindergarten through the fourth grade, with smaller servings and a midmorning glass of fruit juice for the kindergarten children as requested by the supervisors, and larger servings for the children in the primary grades. (b) The thirty cents plate was served to the older children with refills available for high school pupils who came back with a "clean" plate. Thus these four variations were the adjustments for the energy requirement of the different age groups.

Only the large plates were checked for adequacy since in this particular situation these plates were served the boys and girls from the fifth through the eighth grades.

For the fruit and/or vegetable, bread, and milk groups, 100 per cent of the menus met the requirement of the National School Lunch Act (Table VIII). The breads were either whole grain or enriched.

Butter or fortified substitute was below standard. Only 45 per cent of the menus reached the requirement. Almost a third of the menus had as much as 80 to 89 per cent of the requirement, one fifth of the menus had as much as 70 to 79 per cent, and only one twentieth of the menus had 90 to 99 per cent of the requirement.

3. United States War Food Administration. Food Distribution Administration. Menu-Planning Guide for School Lunches. Washington, D. C.: (The Administration), September, 1943, pp. 1-2.

TABLE VIII
ADEQUACY OF SCHOOL LUNCH MENUS

Food groups	Quantity required by the National School Lunch Act	Per cent which serving was of quantity required					
		50 to 59	60 to 69	70 to 79	80 to 89	90 to 99	100 and more

(Number of menus)

Meat, fish, cheese, or poultry	2 oz.						
or	or						
egg	1						
or	or						
legumes	$\frac{1}{2}$ c.						
or	or						
peanut butter	$\frac{1}{4}$ c.	1	-	11	3	-	5
Fruit and/or							
vegetable	$\frac{3}{4}$ c.	-	-	-	-	-	20
Bread, enriched	1	-	-	-	-	-	20
Milk	$\frac{1}{2}$ pt.	-	-	-	-	-	20
Butter or							
fortified substitute	2 tsp.	-	-	4	6	1	9

(Per cent of menus)

Meat, fish, cheese, or poultry	2 oz.						
or	or						
egg	1						
or	or						
legumes	$\frac{1}{2}$ c.						
or	or						
peanut butter	$\frac{1}{4}$ c.	5	-	55	15	-	25
Fruit and/or							
vegetable	$\frac{3}{4}$ c.	-	-	-	-	-	100
Bread, enriched	1	-	-	-	-	-	100
Milk	$\frac{1}{2}$ pt.	-	-	-	-	-	100
Butter or							
fortified substitute	2 tsp.	-	-	20	30	5	45

Meat fell below the standard to the greatest extent. Only one fourth of the menus had 100 per cent and more of the quantity of meat, fish, cheese, or poultry required, a little over one half of the menus had only 70 to 79 per cent of the quantity required, about a sixth had as much as 80 to 89 per cent of the quantity required, and one twentieth had as little as 50 to 59 per cent of the quantity required.

At this point the reader should be reminded that the tabulations on adequacy represent the amount served to the children and not the actual amount of food consumed. No quantitative waste study was made to determine the exact amount of food each child, served the large plate, left on his plate. However, a study was attempted to determine, by means of a system of ranking, approximately the extent to which the various dishes during one week were wasted (pp. 53 to 58).

Comparison of number of servings with requirements shown in A Guide to Good Eating

In order to get some idea as to the extent each child, eating the plate lunch, met his daily food requirements, the questionnaire, "Foods Eaten in Twenty-Four Hour Period", was used (p. 45).

Instructions to each teacher stated that the teacher would supervise the recording of the lunch consumed on the day the survey was begun. She would send the blanks home to the parents who would record the dinner eaten that evening and the breakfast of the following day. The child was to return the blank the following morning and the teacher would check the recording of the foods consumed between meals.

Approximately 360 questionnaires were distributed, one to each child present in school on March 16, 1949. Of these, 249 questionnaires were returned, with 124 indicating that they ate in the cafeteria. Of

FOODS EATEN IN TWENTY-FOUR HOUR PERIOD

NAME _____

GRADE _____

Lunch:

Ate in cafeteria? _____

Ate plate lunch? _____

Dinner (Foods eaten Wednesday March _____):

Breakfast (Foods eaten Thursday March _____):

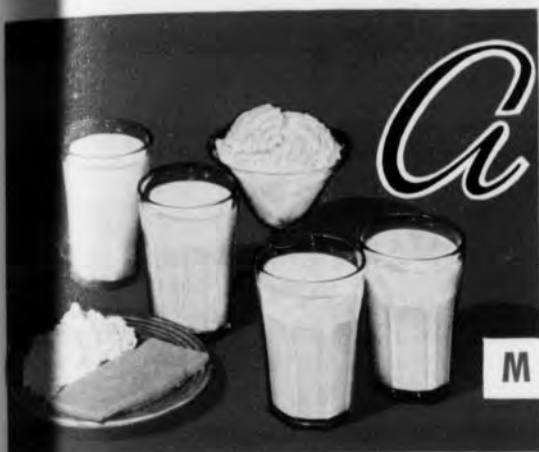
Between Meals (From lunch Wednesday March _____ until lunch Thursday
March _____):

those eating in the cafeteria, 101 ate the plate lunch and twenty-three ate individual items. Faculty and staff members who ate the plate lunches were excluded from the survey.

In tabulating the foods eaten in twenty-four hours by the 101 children who ate the plate lunch, A Guide to Good Eating, a leaflet published by the National Dairy Council and bearing the seal of the American Medical Association, was selected as the basis for determining whether the daily dietary requirements were met (p. 47). This "yardstick", one of the numerous ones established to guide the general public in planning adequate and nutritious diets, is so simple that even the smallest children can understand it; in fact, it is a familiar teaching aid to most teachers of foods and nutrition. The original A Guide to Good Eating was drawn up by the nutritionists of the National Dairy Council and was presented to the Council on Food and Nutrition of the American Medical Association which awarded the leaflet its seal of approval. The revision (1948) was used for this tabulation.

In using A Guide to Good Eating the writer excluded several items under the food groups in order to have more accurate tabulations. First, under Milk, only milk to drink was considered because, with the questionnaire used, it was impractical to determine what proportion of milk was present in a serving combined with other foods, or in ice cream or cheese. Secondly, under Fruits, no attempt was made to determine the frequency of citrus fruits or tomatoes in the diet since the National School Lunch Act makes no distinction as to the type of fruit served. Thirdly, under Eggs, one serving daily was used as the standard rather than the alternate possibility of three to five per week. Finally under Meat, Cheese, Fish, or Poultry, only dried beans and peas were considered

A Guide TO GOOD EATING



MILK

2 OR MORE GLASSES DAILY . . FOR ADULTS
3 to 4 OR MORE GLASSES DAILY . . FOR CHILDREN

*To drink, combined with other foods,
in ice cream and in cheese*



VEGETABLES

2 OR MORE SERVINGS DAILY OTHER THAN
POTATO . . . 1 green or yellow; "greens" often



FRUITS

2 OR MORE SERVINGS DAILY

At least 1 raw; citrus fruit or tomato daily



EGGS

3 TO 5 A WEEK; 1 DAILY PREFERRED



MEAT, CHEESE, FISH, POULTRY

1 OR MORE SERVINGS DAILY

Dried beans, peas, peanuts occasionally



CEREAL AND BREAD

2 OR MORE SERVINGS DAILY

Whole-grain value or enriched

Added milk improves nutritional values



BUTTER

2 OR MORE TABLESPOONS DAILY

OTHER FOODS TO SATISFY
APPETITE AND COMPLETE
GROWTH AND ACTIVITY NEEDS



Statements on this chart have been accepted by the Council on Foods and
Nutrition of the American Medical Association

A Guide TO GOOD EATING

RECOMMENDED FOODS

MILK

Milk—2 or more glasses daily—for adults
3 to 4 or more glasses daily—for children

*To drink, combined with other foods,
in ice cream and in cheese*

During pregnancy and lactation, women should have a quart to a quart and a half of milk daily.

Use milk as a beverage and in cooking—in cereals, milk soups, white sauces, cereal puddings.

Use on fruit, puddings, cereals.

Use as ice cream, cheese, and cottage cheese.

VEGETABLES

Vegetables—2 or more servings daily other than potato
1 green or yellow; "greens" often

Use all vegetables—fresh, canned, dried, frozen.

Green vegetables: asparagus, broccoli, Brussels sprouts, cabbage, green beans, green lettuce, peas, peppers.

"Greens": beef tops, chard, collards, kale, radish tops, spinach, turnip tops; and wild "greens"—such as curly dock, dandelion, lamb's quarters, mustard, sorrel.

Yellow vegetables: carrots, rutabagas, squash, sweet potatoes, yams, yellow corn, yellow turnips.

FRUITS

Fruits—2 or more servings daily

At least 1 raw; citrus fruit or tomato daily

Use all fruits—fresh, canned, dried, frozen.

Citrus fruits: grapefruit, lemons, limes, oranges, tangerines.

Dried fruits: apricots, figs, prunes, raisins.

Use yellow fruits, such as peaches or apricots, often.

EGGS

Eggs—3 to 5 a week; 1 daily preferred

MEAT, CHEESE, FISH, POULTRY

Meat, Cheese, Fish, Poultry—1 or more servings daily

Dried beans, peas, peanuts occasionally

Good rules to follow are

Meat, cheese, fish, or poultry at least 4 or 5 times a week.

One serving of liver, heart, kidney, or sweetbread each week; one serving of fish each week.

Meat: beef, ham, lamb, mutton, lean pork, veal; fish; poultry.

Variety meats: brains, flank, heart, kidney, liver, oxtail, pig tails, shanks, sweetbread, tripe.

Cheese: American, cottage, Swiss, other.

Legumes: dried kidney, Lima, navy, pinto, and soybeans; dried peas; lentils; peanuts and peanut butter.

CEREAL AND BREAD

Cereal and Bread—2 or more servings daily

Whole-grain value or enriched

Added milk improves nutritional values

Whole grains: oatmeal; cracked wheat; ground, granulated, flaked, rolled, or shredded whole wheat; brown rice; yellow corn meal; others.

BUTTER

Butter—2 or more tablespoons daily

Use as a spread for bread, on cooked vegetables, and in cooking and baking.

OTHER FOODS

Other foods to satisfy appetite and complete growth and activity needs.

The above "Guide," if followed, furnishes most of the needs of the body except calories. The amount of physical activity and rate of growth and development control calorie needs. To meet these varying needs, use additional servings of any of the above foods or other foods.

FOOD VALUES

MILK

1 glass equals $\frac{1}{2}$ pint or $\frac{1}{4}$ quart.

Milk is especially important for fine quality proteins, high content of calcium, phosphorus, vitamin A, and riboflavin, considerable amounts of thiamine (vitamin B₁).

Cheese (American Cheddar)—Five ounces is about equal to one quart of milk in calcium, phosphorus, protein content.

Cottage cheese—Average serving is $\frac{1}{2}$ cup. This amount contains about three times as much protein as one cup of milk and less of other nutrients in milk.

Ice cream—Average serving is $\frac{3}{4}$ cup. Contains varying amounts of all dietary essentials found in milk.

VEGETABLES

Average serving is $\frac{1}{2}$ cup.

All vegetables supply vitamins, minerals, and roughage. "Greens," other green and yellow vegetables are especially valuable for vitamin A and iron. "Greens" are recommended often—2 or 3 times a week, preferably.

Use raw or cooked. To save nutrients cook quickly in a small amount of water and use the water in which vegetables are cooked for soups and gravies.

FRUITS

Average serving is $\frac{1}{2}$ cup.

All fruits supply vitamins, minerals, and roughage.

Citrus fruits and tomatoes should be used regularly. Twice as much tomato as orange is necessary for the same amount of vitamin C. Other sources of vitamin C are all raw fruits and vegetables, especially raw cabbage, strawberries, cantaloupe.

Dried fruits are especially valuable for iron.

Yellow fruits supply generous amounts of vitamin A.

EGGS

Eggs are especially valuable for complete proteins, iron, phosphorus, vitamin A.

MEAT, CHEESE, FISH, POULTRY

Meats supply complete proteins, phosphorus, iron, thiamine, riboflavin, and vitamin A (liver).

Cheese is especially important for complete proteins, calcium, vitamin A. Use with cereals, in souffles, and in salads.

Fish are chiefly important for proteins and phosphorus. Salt water fish also furnish iodine.

Legumes are chiefly important for low cost source of energy, proteins, phosphorus, iron, thiamine. Because they are not a source of complete proteins, legumes should be used only as a supplement—not as a total substitution for the animal proteins. Soybeans and peanuts are more nearly similar to animal proteins than other vegetable sources.

CEREAL AND BREAD

Average serving: breakfast food, $\frac{1}{2}$ to $\frac{3}{4}$ cup; bread, one or more slices. Cereal and bread—whole-grain value or enriched—supply energy, thiamine, riboflavin, niacin, iron, phosphorus, proteins.

Breads made with milk and cereals cooked and/or served with milk are improved especially in quality of protein and in quantity of protein, calcium, phosphorus, and riboflavin.

BUTTER

Butter is especially valuable for vitamin A and energy.

OTHER FOODS

As extra calories are made up from foods listed in the "Guide," the more nearly an optimal diet is approached. Sugar is an energy food, but makes no other dietary contributions. A diet low in concentrated sweets contributes to dental health.

Some source of vitamin D should be included. Fish liver oils, vitamin D milk, and direct sunshine are good sources of this vitamin. Infants and growing children and expectant and nursing mothers need added amounts of vitamin D.

in addition to the main items, omitting peanuts because most peanuts consumed were in combination with candy.

For the purpose of comparing results on adequacy of the survey with those of the menu check list, the following combinations were made of the main headings listed on A Guide to Good Eating:

Meat, cheese, fish, poultry	- 1 serving) 2 servings
Egg	- 1 daily	
Vegetables		
Potato	- 1 serving) 5 servings
Green or yellow	- 1 serving	
Other	- 1 serving	
Fruits		
Raw	- 1 serving) 1 serving
Other	- 1 serving	

According to the survey inadequate diets are characteristic to some extent among the children of Curry School (Table IX). Milk, the one most nearly perfect food, was lacking in the diets more than any other food group, for a total of 80 per cent of the pupils consumed less than the standard number of servings required daily. Of these, 51 per cent had less than standard by one serving, 25 per cent had less by two servings, and 4 per cent had less by three servings. Of the children who had less than the standard quantity, a few ate ice cream (not included in the tabulation) which may have eased the situation a little, for the 1948 revision of the Guide permits counting ice cream as a part of the milk.

Butter or fortified substitute was next on the list in inadequate consumption. Almost three fourths of the children had less than the standard by one part or one half of the daily requirement. Only one tenth met the requirement, and only one sixth had more than the requirement.

Whole grain or enriched cereals, as would be expected since it is

TABLE IX

ADEQUACY OF FOODS EATEN IN TWENTY-FOUR HOUR PERIOD

(101 pupils eating the plate lunch in Curry Demonstration School
Cafeteria, Woman's College of the University of North Carolina)

Food groups	Quantity required daily	Servings eaten were								
		Less than standard by				Same as standard	More than standard by			
		4	3	2	1		1	2	3	4
		(Number of pupils)								
Meat, cheese, fish or poultry	1	-	-	-	-	8	77	16	-	-
Egg	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>31</u>	<u>55</u>	<u>14</u>	<u>1</u>	<u>-</u>	<u>-</u>
All protein	2	-	-	-	5	26	54	14	2	-
Vegetables										
Potato	1	-	-	-	-	52	46	3	-	-
Green or yellow	1	-	-	-	-	20	56	23	2	-
Other	1	-	-	-	48	39	13	1	-	-
Fruits										
Raw	1	-	-	-	26	43	25	5	2	-
Other	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>62</u>	<u>31</u>	<u>8</u>	<u>-</u>	<u>-</u>
All fruits, vegetables	5	-	-	-	5	20	22	19	22	13
Whole grain	2	-	-	-	7	17	31	34	12	-
Butter	2 pats	-	-	-	75	10	13	3	-	-
Milk	4 gl.	-	4	25	52	16	4	-	-	-
(Per cent of pupils)										
Meat, cheese, fish or poultry	1	-	-	-	-	8	76	16	-	-
Egg	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>31</u>	<u>54</u>	<u>14</u>	<u>1</u>	<u>-</u>	<u>-</u>
All protein	2	-	-	-	5	26	53	14	2	-
Vegetables										
Potato	1	-	-	-	-	51	46	3	-	-
Green or yellow	1	-	-	-	-	20	55	23	2	-
Other	1	-	-	-	47	39	13	1	-	-
Fruits										
Raw	1	-	-	-	26	42	25	5	2	-
Other	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>61</u>	<u>31</u>	<u>8</u>	<u>-</u>	<u>-</u>
All fruits, vegetables	5	-	-	-	5	20	22	19	22	12
Whole grain	2	-	-	-	7	17	31	33	12	-
Butter	2 pats	-	-	-	74	10	13	3	-	-
Milk	4 gl.	-	4	25	51	16	4	-	-	-

one of the most popular and economical foods, made a good showing on the survey with only 7 per cent of the children having less than the requirement by one serving. About three fourths of the pupils had more than the minimum standard by one or more servings.

Only 5 per cent of the children had less than the required number of servings of fruits and vegetables. These children lacked only one serving of reaching the standard. Of the 101 boys and girls, 20 per cent consumed the standard; and three fourths had more than the minimum standard by one or more servings: 22 per cent having one additional serving, 19 per cent having two additional servings, 22 per cent having three additional servings, and 12 per cent having four additional servings.

From a dietitian's standpoint, the writer felt the necessity of including the findings on each type of vegetable and fruit since it is essential that each child eat specific ones to provide particular nutrients. Of the vegetables, about half of the children met the requirement for the potato and the other half exceeded the standard. Even for the green and yellow vegetables, the standard was amply supplied, with the majority of the children eating more than standard by one or two servings. Although about one half of the children lacked one other vegetable, actually many had eaten a second potato or serving of green or yellow vegetable which fell in other categories. Raw fruits were not consumed by about one fourth of the children, while about two fifths ate the proper amount, and a total of 32 per cent of the pupils ate more than the requirement by one or more servings. The other fruits were consumed in adequate or more than adequate quantities.

Only 5 per cent of the children lacked the required number of

servings of meat, cheese, fish, poultry, or eggs. As many as 26 per cent had the standard requirement in servings, with about 70 per cent exceeding the standard by one or more servings. Possibly the meat was not adequate in quantity for those 26 per cent who counted a serving at school as one complete serving. The meat served at school was not quite adequate on three fourths of the menus.

Again the writer believed it necessary to present the data on eggs and meats individually. As many as 8 per cent ate the required serving of meat, and a total of 92 per cent ate additional servings: 76 per cent, one extra serving; and 16 per cent, two extra servings. Eggs failed to present as favorable findings, for 31 per cent of the children did not consume the required egg. However, it was interesting to note that 14 per cent had more than the standard by one serving, and 1 per cent had more by two servings.

Thus the foods which needed to be increased most in consumption by the Curry patrons were: milk, butter or fortified substitute, eggs, and raw fruits. There is a possibility that some of the children failed to record butter or fortified substitute on their questionnaire since it is used most frequently as a spread or seasoning in foods. Since there was considerable inadequacy in the diets of the Curry children, it might be well to check the contribution of the cafeteria lunch to the day's requirements.

The Federal Type A lunch is supposed to meet from one third to one half of the day's food requirements. Thus a comparison was attempted to determine whether the servings of food consumed at school approximated one third to one half of the required number of servings in each food group per day. No attempt was made to calculate the results of the

101 questionnaires in terms of calories, grams of protein, and other detailed figures.

Of the two servings of meat required, the plate lunch provided one half, or one serving. Two vegetables plus one fruit were served on the plate; therefore over one half of the requirement in servings was satisfied. At least one serving of whole grain or enriched cereal, one half of the standard, was consumed in the cafeteria. Almost one pat of fortified butter substitute was provided for patrons of Curry Cafeteria. Again, about one third of the requirement was met. The one half of a pint of milk served daily with the plate lunch afforded only one fourth of the day's requirement, and little milk was consumed in combination with other foods. It is not too difficult for most children to meet the requirement for milk, provided they are served one glassful at each of the three meals and are encouraged to eat foods containing milk in one form or another. Although they did not care for creamed foods, these particular children were faithful consumers of ice cream--a relatively rich source of milk. Apparently the inadequacy in the number of servings was in the foods eaten at home.

School's responsibilities for overcoming dietary inadequacies

The school has a great responsibility for the child's education and general development. Certainly it has the responsibility of overcoming the inadequacies in nutrition which may lead to poor body growth and development. Two methods of attacking the problem are suggested by the writer: (1) serving the Type "A" plate lunch plus an educational program and (2) planning the plate lunches to supplement the foods served at home.

Applying the first method at the Curry School would involve

increasing the butter or fortified substitute and protein contents of the lunch to meet the requirements of the National School Lunch Act. Yet it does not seem practical to increase the cost of the plate lunch by serving additional quantities of meat since it was found that the children eat too much meat at home. It would appear more feasible to substitute eggs and meat substitutes, which are usually cheaper items. The accompanying educational campaign should encourage each boy and girl from kindergarten through the twelfth grade to eat at home more milk, butter, eggs, and raw fruits possibly instead of some of the meats, starchy vegetables, cooked fruits, and cereals. The Type "A" lunch alone in this school would not solve the nutritional problem.

The other method for solving the problem of inadequacy within specific food groups would be to supply at school those foods which are inadequately consumed at home rather than serve the Type "A" lunch. The school lunch would then emphasize milk, butter or fortified substitute, eggs, and raw fruits.

Food Waste

Waste of food is a commonplace occurrence in many institutions. Food may be beautifully prepared and served; yet if the child does not eat it, he is not receiving his quota of food nutrients. "Hidden" hunger may still linger. "Waste in Individual Plates" is a short survey which was used in the study to check on (1) the extent to which the food appealed to the children and faculty and (2) the intake of the food nutrients by the individuals.

The waste on plate lunches served to children of all ages was observed carefully by one person for a week. As the trays were returned to the soiled dish window, each plate was checked as to the amount of

waste. The plate waste was rated as "none", "little", "some", "most", or "all" for each food. The most frequent amount of waste was noted for each food or dish.

For each food served during the five days, the most frequent amount of waste was "none" (Table X). However, in the opinion of the observer, there was still too much waste in general among certain grades, especially the lower grades and kindergarten. The food, in their case, was decreased in October, 1948 below the recommended requirement for their age at the request of the supervisors and according to the judgment of the management. Food waste is still a daily occurrence--without regard to the menu in most cases. No attempt was made with this study to uproot the underlying cause, but it is a problem which should be studied separately.

Those foods in which most waste occurred were: liver loaf on 40 per cent of the plates, carrots-raisin salad on 34 per cent, baked fish and green peas on 30 per cent, and glazed sweet potatoes on 26 per cent (Table XI). The amount of waste may have been "little", "some", "most", or "all" of the serving.

The food groups in which the highest percentage of waste occurred were the "meats" and the "other vegetable and/or fruit". Less waste was evident in the categories of "starch or main vegetable", "bread", and "dessert". Milk was consumed with less waste than any other food; the highest percentage of plate waste in milk was 9 per cent. This is an indication that the children liked milk and would probably drink more if it were served in greater quantities at home.

After having studied the amount of plate waste with the comments which the committee of six judges offered on the same five menus, it was

TABLE X
WASTE IN INDIVIDUAL PLATES

Dishes served	Per cent of plates with given amount of waste					Mode
	All	Most	Some	Little	None	
March 14, 1949						
127 plates						
Egg Salad	1	5	3	9	82	None
Baked Potato	-	5	4	4	87	None
Fruit-vegetable salad	-	7	3	6	84	None
Buttered whole wheat bread	1	7	2	2	88	None
Plain cake with orange sauce	3	2	-	2	93	None
Milk	1	1	-	2	96	None
March 15, 1949						
128 plates						
Baked fish	6	7	7	10	70	None
Escalloped potatoes	6	3	4	7	80	None
Buttered beets	3	3	4	9	81	None
Cornbread	1	2	7	3	87	None
Lemon pie	4	2	2	2	90	None
Milk	-	2	2	5	91	None
March 16, 1949						
140 plates						
Swedish meat balls, gravy	1	4	2	7	86	None
Mashed potatoes	1	3	4	8	84	None
Green peas	1	6	8	15	70	None
Buttered rolls	4	1	4	6	85	None
Glazed apples	6	2	4	9	79	None
Milk	1	-	1	4	94	None

TABLE X (continued)
WASTE IN INDIVIDUAL PLATES

Dishes served	Per cent of plates with given amount of waste					Mode
	All	Most	Some	Little	None	
March 17, 1949						
144 plates						
Hot roast beef						
sandwich, gravy	8	6	1	3	82	None
Glazed sweet potatoes	9	7	2	8	74	None
Cabbage-pepper salad	3	7	6	6	78	None
Buttered whole wheat						
bread	1	3	1	3	92	None
Fruit compote	4	4	4	6	82	None
Milk	1	1	2	1	95	None
March 18, 1949						
129 plates						
Liver loaf, gravy	13	12	7	8	60	None
Buttered potatoes	4	8	1	7	80	None
Carrots-raisin salad	6	10	7	11	66	None
Cornbread	4	4	8	7	77	None
Fruit bars	2	-	1	-	97	None
Milk	1	2	1	1	95	None

TABLE XI

PER CENT OF PLATES ON WHICH GIVEN FOOD WAS WASTED *

(Plate lunches served during the week of March 14-18 in the Curry Demonstration School Cafeteria)

Food groups	Monday		Tuesday		Wednesday		Thursday		Friday	
Meats	Egg salad	18	Baked fish	30	Swedish meat balls, gravy	14	Hot roast beef sandwich	18	Liver loaf, gravy	40
Starch or main vegetable	Baked potato	13	Escalloped potatoes	20	Mashed potatoes	16	Glazed sweet potatoes	26	Buttered potatoes	20
Other vegetable and/or fruit	Fruit-vegetable salad	16	Buttered beets	19	Green peas	30	Cabbage-pepper salad	22	Carrots-raisin salad	34
Bread	Buttered whole wheat bread	12	Cornbread	13	Buttered roll	15	Buttered whole wheat bread	8	Cornbread	23
Dessert	Plain cake with orange sauce	7	Lemon pie	10	Glazed apples	21	Fruit compote	18	Fruit bars	3
Beverage	Milk	4	Milk	9	Milk	6	Milk	5	Milk	5

* The portions of food wasted may have been "all", "most", "some", or "little".

evident that little of the waste was due to lack of appetite appeal according to home economists. Two of the menus received no comments, and three menus received only one, two, and three comments each. The menu on which most waste occurred included liver loaf and carrots-raisin salad which the children apparently did not care for. Even some adults have not learned to tolerate particular foods due to their characteristic flavor and texture. One judge thought that there was lack of harmony since liver and raisins are not too "chummy". Another judge agreed that it lacked harmony and suggested substituting a roll for the cornbread. The judge who rated the menus, considered these menus "good".

Apparently, the food appealed to the children from the aesthetic standpoint since the waste was at a minimum, for in only five foods was there waste on 25 per cent or more of the plates. On the whole, there was not enough waste to greatly affect the nutritive intake. Continuation of attractive and appealing plates and education in good food habits will probably be the answer to the problem of waste. Certainly the quantity should not be decreased to relieve the situation, for then the possibilities for adequate nutrition are demolished.

Management of Labor

Efficient, planned management of labor is necessary to profitable organizations in any field, and especially is it true in the case of a food center. West and Wood say that "if each unit in the organization is constantly related to the main purpose, it becomes apparent that every activity touches many departments and that there is absolute necessity for correlation and coordination."⁴ This statement is likewise

4. Bessie Brooks West and Levelle Wood, Food Service in Institutions. New York: John Wiley and Sons, Inc., 1945. p. 341.

true of a small three-unit kitchen such as the existing one at the Curry School. Each person must know his job and be able to complete his tasks within the time allotted. Differentiation of units prevents one employee's getting in the path of another in motion. Duplication and confusion can be eliminated.

To provide definite information concerning the function of each unit in the Curry kitchen and the responsibilities that each employee must assume, written directions were devised for the head cook, assistant cook, and dishwasher and general helper, respectively during the first few months of the school term of 1948. In developing these sheets, the goal was to maintain a high degree of coherence, simplicity, and specificity. One problem in compiling the sheets evolved around the selection of a representative title. It was felt that the information on the sheets should be designed to fill the needs of the workers in each particular situation and eventually included both a portion of the job analysis and parts of the work sheet. Because of the fact that, according to West and Wood, job specification is "a summary of a job analysis, simple in form yet containing the essential information concerning the requirements of the job and the qualifications of the worker,"⁵ it was decided to combine the contents of the sheets under the title of "job specification". At the beginning of the study on labor, the original "job specifications" were modified to provide a space permitting observational comments on each employee. (pp. 60 to 64).

From the observations, conducted without the employees' knowledge, the workers did not waste time (pp. 129 to 153). In several

5. Ibid., p. 345.

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5. Ibid., p. 345.

JOB SPECIFICATION

NAME OF JOB: First Cook

SUPERVISION: The first cook is directly responsible to the manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The first cook manipulates the range, the steam-jacketed kettle, oven, peeler, and mixing machine. She has at hand the cook's table, refrigerator, and the usual small equipment. The cook procures perishables from the manager daily and staples and cleaning supplies as needed. All food is issued by the manager.

WORK SCHEDULE

OBSERVED: _____

8:00 - Reports to work	:	_____
	:	_____
8:30 - Checks menu	:	_____
	:	_____
Checks left-overs	:	_____
	:	_____
Secures necessary supplies	:	_____
	:	_____
Prepares soup for lunch	:	_____
	:	_____
8:30-11:00 - Prepares main luncheon	:	_____
dish	:	_____
Cooks vegetables for lunch	:	_____
	:	_____
Aids cook in other unit,	:	_____
if necessary	:	_____
Makes dessert, if necessary	:	_____
	:	_____
11:00 - Completes all food prepara-	:	_____
tion	:	_____
11:00-11:15 - Takes prepared food to	:	_____
counter	:	_____
11:15-12:30 - Replenishes counter as	:	_____
necessary	:	_____
12:30-1:00 - Eats lunch	:	_____
	:	_____
1:00-2:30 - Puts away left-overs	:	_____
	:	_____
Helps wash pots and pans	:	_____
	:	_____
Checks left-overs in other	:	_____
cook's refrigerator	:	_____
Cleans unit	:	_____
	:	_____
2:30 - Goes off duty	:	_____
	:	_____

JOB SPECIFICATION

NAME OF JOB: Assistant Cook

SUPERVISION: The assistant cook is directly responsible to the first cook and manager. An atmosphere conducive to mutual respect and co-operation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The assistant cook manipulates the slicer, shredder, and all small equipment necessary for the job. She has at hand the vegetable sink, salad table, supply cabinet, and salad refrigerator.

WORK SCHEDULE:	OBSERVED _____
8:00 - Reports to work _____	: _____
8:05-8:30 - Checks menu, procures sup- plies for her unit and checks left-overs _____	: _____ : _____ : _____
8:30-10:50 - Prepares vegetables for salad _____	: _____ : _____
Prepares dessert when nec- essary _____	: _____ : _____
Makes toast for soup _____	: _____ : _____
Prepares bread, rolls, etc. _____	: _____ : _____ : _____
Makes sandwiches _____	: _____ : _____
Prepares salad _____	: _____ : _____
Makes coffee _____	: _____ : _____
Assists head cook if nec- essary _____	: _____ : _____ : _____
10:50-11:00 - Serves dessert _____	: _____ : _____
11:00 - Completes all food prepara- tion _____	: _____ : _____
11:00-11:30 - Sends prepared food to counter _____	: _____ : _____
11:30-12:00 - Eats lunch _____	: _____ : _____
12:00-12:40 - Replenishes food to coun- ter while head cook eats, etc. _____	: _____ : _____ : _____
12:40-1:05 - Serves kindergarten (Re- fills) _____	: _____ : _____
1:05-2:30 - Puts away left-overs _____	: _____ : _____
Finishes washing pots and pans _____	: _____ : _____

Cleans counter and other : _____
 equipment in serving unit : _____
 in dining room : _____
 Cleans unit : _____

2:30 - Goes off duty : _____
 : _____

JOB SPECIFICATION

NAME OF JOB: Dishwasher and General Helper

SUPERVISION: The dishwasher and general helper is directly responsible to the head cook and manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: This employee manipulates the dishwasher and has at hand the bread tables. He is responsible for the cleaning of the dining area, which includes tables, counters, and water fountain, and small equipment necessary to his tasks.

WORK SCHEDULE:

OBSERVED: _____

8:00 - Reports to work	:	_____
	:	_____
8:05-8:30 - Cleans dining room	:	_____
	:	_____
Ventilates dining room	:	_____
	:	_____
Cleans counter and service	:	_____
tables	:	_____
8:30-9:30 - Arranges for serving: sil-	:	_____
ver, straws, napkins,	:	_____
sugar, trays	:	_____
Fills salt shakers when	:	_____
necessary	:	_____
Kills flies when necessary	:	_____
	:	_____
Cleans storeroom when	:	_____
necessary	:	_____
9:30-10:30 - Peels vegetables listed on	:	_____
menu	:	_____
Arranges dishes, cups and	:	_____
saucers on counter	:	_____
10:30-10:45 - Checks water in steam	:	_____
table	:	_____
Lights gas under steam	:	_____
table	:	_____
10:45-10:50 - Puts cream on counter	:	_____
	:	_____
Washes pots and pans	:	_____
	:	_____
10:50-11:20 - Eats	:	_____
	:	_____
11:20-1:30 - Receives dishes, stacks	:	_____
them individually	:	_____
(Cleans up after accidents)	:	_____
	:	_____

	Washes dishes, needed for	:	_____
	immediate use, usually	:	_____
	trays, small plates, and	:	_____
	teaspoons	:	_____
	Cleans all tables and	:	_____
	chairs in dining area	:	_____
1:30-2:00 -	Washes all dishes, puts	:	_____
	them away	:	_____
	Cleans equipment	:	_____
		:	_____
2:30 -	Goes off duty	:	_____
		:	_____

instances they were late to work, partially due to the fact that they commuted and had difficulty in meeting bus schedules. Occasionally the workers left a few minutes early in the afternoons, but not until their units were cleaned and everything was in order. The days were evened up at the end, for at other times, the employees felt the necessity of remaining overtime a few minutes (without additional pay) to complete their tasks.

The first cook surpassed the other workers in efficiency, possibly due to the fact that she had had more training in the past. Moreover, she was alert, had high food standards, and exhibited an ability to work with others. The dietitian could depend on her to relieve her of specific responsibilities in case of emergencies. This employee was abrupt in manner occasionally, but in general accepted constructive criticism. She offered suggestions for improvement of the kitchen and its operations.

The assistant cook was less experienced and efficient, but had a wonderfully cooperative spirit. She ranked the highest of the three in the ability to work with others and to accept constructive criticisms. She, too, offered some suggestions but was not too alert to the situation, yet she was dependable and had better than average food standards. She had a tendency to forget the time, especially her scheduled time to eat. It was amazing to observe her interest in trying to measure and weigh accurately in an effort to keep the recipes standard--a process to which she had not been accustomed.

The dishwasher and general helper was the third and only male employee. His duties were routine for the most part, but in general the most flexible. It was necessary to revise his procedure in several

instances, partially because he was new to the job and could not interpret all of the directions in every case. Once he had understood the directions, the dietitian could be assured that the job would be carried out efficiently. He demonstrated ability to work with others and accepted constructive criticisms. Perhaps he received more criticisms during the observation than any other worker, but in return he showed more improvement than any other employee.

Cost of Food Served

After carefully weighing all angles of approach to cost analysis, it was believed that it would be impossible to ascertain an accurate daily per capita cost on plate lunches due to the service of plates with portions of four different sizes. Had the food (A. P.) been issued separately for each of the four sizes, such data could have been computed. Thus the method of issuance of raw materials determined the feasibility of the method used in tabulating food costs.

An itemized food cost account for the plate lunches was procured from the Curry Cafeteria's daily food requisitions. After the cost of the food which was left over at the end of the day had been deducted, these figures were recorded on the blank, "Cost of Food Served" (p. 67). (All left-overs were used later in a different form in individual items not on the plate lunch.) The average cost per plate was stated, determined by dividing the daily food cost by the total number of plates served.

Of the controllable items of expenditure in the budget of the institutional food service, food is the largest item. The average expenditure for raw food is approximately 50 per cent, varying with the

type of institution and its policies. The trend in school lunch food service is toward 50 per cent and above, depending upon the volume of business, the type of labor available, the trend in prices of food materials, and the amount of financial aid, if any, received. The Curry Cafeteria is a self-supporting organization with a comparatively small volume of business. At the time of this study, salaries and wages amounted to fourteen dollars and seventy-three cents per day. During 1948 and 1949, food prices were high but, fortunately, appeared to be dropping a little during the spring. Over 50 per cent of the receipts from plate lunches was used for actual food expenditures (Table XII). On only two days were the food costs less than 50 per cent. The food costs were great enough on other days to absorb the differences on these two days. The total expenditures for the month were within the budget.

According to the monthly report taken from Curry Cafeteria files, the figures below present the financial picture for the calendar month during which most of the present study was conducted:

Food costs for plate lunches and individual items	\$ 546.22
Total operating costs	329.15
Net profit to be used for equipment and improvements.	47.21
Total	<u>\$ 922.58</u>

Therefore when both plate lunches and individual items were considered, the total food cost was greater than 50 per cent of the total income.

TABLE XII

COMPARISON OF THE TOTAL DAILY FOOD COSTS FOR PLATE LUNCHES WITH
FIFTY PER CENT OF THE TOTAL DAILY RECEIPTS FROM PLATE LUNCHES

Days	Food cost for plate lunches	Fifty per cent of receipts from plate lunches
February 28	\$ 18.69	\$ 17.25
March 1	21.13	18.23
March 2	18.77	18.18
March 3	23.07	18.70
March 4	17.36	16.98
March 7	20.89	17.95
March 8	24.14	20.83
March 9	22.20	17.75
March 10	18.78	19.10
March 11	20.79	17.63
March 14	18.20	17.35
March 15	19.45	17.40
March 16	24.94	19.48
March 17	22.83	19.75
March 18	15.64	17.63
March 21	30.00	16.20
March 22	26.72	21.35
March 23	22.80	18.70
March 24	23.10	19.13
March 25	24.77	20.83
Totals	\$ 434.27	\$ 370.42

CHAPTER IV

SUMMARY, FINDINGS, AND RECOMMENDATIONS

An attempt was made in this study to evaluate the school lunch menus used in the Curry Demonstration School of the Woman's College of the University of North Carolina as to attractiveness and adequacy in relation to the time, labor, and money available. A check list for this evaluation was set up and twenty typical menus served to the children and members of the faculty and staff as plate lunches were judged. By means of a survey, the foods eaten by the children within a given twenty-four hour period were determined. Observations were made of the labor situation, and food costs were tabulated.

As for time, only eight dishes were late during the period of twenty days. One dish was ten minutes late; however, it was raisin cobbler, a dessert, and thus did not delay the cafeteria line. No other dish was later than five minutes.

As for the person responsible for food preparation, the head cook handled a total of fifty-five dishes whereas the assistant cook prepared fifty-three. The dishwasher and general helper handled ten dishes although food preparation was not his chief responsibility. Apparently the work was evenly distributed. According to the observations, the workers were busy most of the time and managed their time well. In general, they followed the directions on their "job specifications" in carrying out their daily assignment and accepted constructive criticism with the idea of learning. The number of methods of preparation made possible an even distribution of work among the

employees and was varied enough for interest. Fifty-five per cent of the twenty menus required at least four methods of preparation and 30 per cent included as many as five of the possible six methods. The most frequently used methods of preparation were "steamed, stewed, boiled", "used as purchased", and "baked, broiled, fried". Those less frequently used were "raw", "warmed", and "creamed".

Food cost tabulations indicated that over 50 per cent of the receipts from the plate lunches served on the twenty days of the study was used for actual food expenditures. Furthermore, the total expenditures for the calendar month were within the budget.

Menus must be attractive to appeal to even the youngest patron of a food service institution. To secure attractiveness, four aesthetic requirements--variety, harmony, contrast, and balance--are essential.

In general, there was variety from day to day and from week to week in the dishes served in the Curry Cafeteria. Only one meat was served twice--meat loaf--at the request of a group of the children who consider this dish a favorite. None of the dishes in the "starch or main vegetable" or the "other vegetable and/or fruit" groups were repeated more than four times; and only mashed potatoes were repeated on the same day--Tuesday of the second and fourth weeks. The service of breads was limited to three kinds due to the kitchen set-up and the volume of business at the time of the study; however, there was variety from day to day, except once where the week-end separated the two consecutive days. No dessert was repeated on any menu. Milk was the only beverage served in order to meet the standards for adequacy.

Variety in menus was checked for the five food characteristics--color, flavor, form (A. P.), shape, and texture. There was sufficient

variety in both (1) the number of characteristics and (2) the particular characteristics present in the twenty menus. For example, 60 per cent of the menus had as many as four colors; the following colors were used in 80 per cent or more of the menus: tan-brown, white-cream, green, and yellow-red. The methods of preparation were varied enough to afford appetite appeal, since 85 per cent of the menus included four or more methods of preparation.

Harmony, contrast, and balance were subjective requirements which could not be merely checked on the check list. A committee of six judges studied the menus and offered critical comments. One other judge preferred to rate the menus as to the presence of the aesthetic requirements. The characteristic "texture" on the menus received the largest number of critical comments from the committee of six judges although it received the highest rating by the one judge.

HARMONY, CONTRAST, AND BALANCE IN THE TWENTY MENUS

Five characteristics	Number of menus receiving critical comments from one to six judges on the committee	Number of menus rated excellent or good by one judge			
		Harmony	Contrast	Balance	All*
Texture	10	18	14	12	44
Flavor	8	15	11	11	37
Color	7	12	10	10	32
Shape	7	16	12	12	40
Form, A. P.	3	15	10	9	34

* The three aesthetic requirements; variety is discussed elsewhere.

"Form" received the least number of critical comments from the committee of six judges but was rated low by the one judge. Comparison of the amount of plate waste with the comments which the committee of six judges

offered on the same five menus indicated that little of the waste was due to lack of appetite appeal according to the home economists. Plate waste was high for foods which the children did not particularly like. In only five foods--liver loaf, carrots-raisin salad, baked fish, green peas, and glazed sweet potatoes--was there waste on 25 per cent or more of the plates. The seven judges did not agree with each other or with the children's tastes. However, they did seem to indicate that the menus, on the whole, were good--not excellent--in harmony, contrast, and balance in the five characteristics of color, flavor, form (A. P.), shape, and texture. From 10 to 17 menus received no critical comments on any one characteristic by the committee of six judges; 9 to 18 menus were rated excellent or good by the one judge on the various characteristics.

The menus which received no critical comments on harmony, contrast, and balance from the committee of six judges were:

March 1, 1949

Corned Beef Hash
Buttered Corn
Mixed Vegetable Salad
Buttered Whole Wheat Bread
Applesauce
Milk

March 14, 1949

Egg Salad
Baked Potato
Fruit-Vegetable Salad
Buttered Whole Wheat Bread
Plain Cake with Orange Sauce
Milk

March 17, 1949

Hot Roast Beef Sandwich, Gravy
Glazed Sweet Potatoes
Cabbage-Pepper Salad
Buttered Whole Wheat Bread
Fruit Compote
Milk

March 24, 1949

Beef Stew
Buttered Potatoes
Cole Slaw
Buttered Roll
Orange
Milk

The four menus which received from five to seven critical comments on these aesthetic requirements from the committee of six judges were:

March 2, 1949

Fish Patties
Buttered Potatoes
Carrots-Raisin Salad
Cornbread
Dried Peaches
Milk

March 3, 1949

Meat Loaf, Gravy
Mashed Potatoes
Green Peas
Buttered Roll
Gingerbread
Milk

March 7, 1949

Ham Salad
Buttered Potatoes
Green Peas
Buttered Whole Wheat Bread
Apple Cobbler
Milk

March 11, 1949

Salmon Loaf
Creamed Potatoes
Buttered Carrots
Cornbread
Lemon Custard
Milk

The menu rated highest on harmony, contrast, and balance by the one judge was:

March 9, 1949

Braised Liver
Buttered Corn
Shredded Lettuce
Buttered Whole Wheat Bread
Spiced Peaches
Milk

The menu rated lowest on these aesthetic requirements by the one judge was that of March third which received six critical comments from the committee of six judges.

So far as adequacy was concerned, the three food groups which need attention are: milk, butter or fortified substitute, and meat or meat substitute.

ADEQUACY IN TWENTY SCHOOL LUNCH MENUS AND IN FOODS EATEN AT HOME
IN A TWENTY-FOUR HOUR PERIOD

Food groups	Percentage of menus which met the requirements of the National School Lunch Act	Percentage of pupils for whom the number of servings eaten compared with <u>A Guide to Good Eating</u> were:		
		Less than standard by	Same as standard	More than standard by
Fruit and/or vegetable	100	5	20	75
Bread, enriched	100	7	17	76
Milk	100	<u>80</u>	16	4
Butter or fortified substitute	<u>45</u>	<u>74</u>	10	16
Meat, fish, cheese, or poultry	<u>25</u>	5	26	69

Although only 25 per cent of the plate lunch menus included a large enough quantity of meat or meat substitute to meet the School Lunch Act requirement, only 5 per cent of the children ate fewer servings in twenty-four hours than are required by A Guide to Good Eating

and about 70 per cent ate more than the required number of servings. Since 95 per cent of the children ate enough meat or meat substitute and since they tend to eat meat rather than eggs and meat substitutes at home, it would seem advisable to serve these more frequently on the plate lunch instead of meat and not be concerned about the size of the servings on the plate lunch.

Almost half of the plate lunch menus did not meet the School Lunch Act requirement in the quantity of butter or fortified substitute, and approximately three fourths of the children lacked the standard number of servings in twenty-four hours. Thus the amount of butter or fortified substitute should be increased both at school and at home.

Although the plate lunch menus met the National School Lunch Act requirement for the quantity of milk, 80 per cent of the children did not drink enough milk in the twenty-four hours. In addition to the service of one glassful of milk per meal, the inclusion of more milk in combination with other foods both at school and at home or a possible in-between-meal serving of milk or milk product is recommended. During the five days the waste was checked at school, milk was wasted by only 4 to 9 per cent of the pupils which indicates that the children like milk and would drink more at home if it were only served to them.

On the whole there was not enough plate waste to greatly affect the nutritional intake, for actually in only five foods was there waste on 25 per cent or more of the plates.

The plate lunch menus were planned to be prepared with the available time, labor, and money. They were varied and were rated good on harmony, contrast, and balance. They were adequate except for the quantity of butter or fortified substitute served. However, if the Curry

children are to have adequate diets, either an adequate plate lunch at school should be accompanied by an educational program to increase the use of butter or fortified substitute, milk, and eggs at home or the plate lunch should be modified to supplement the foods eaten at home rather than meet the National School Lunch Act requirements.

The following techniques or methods proved satisfactory in this study but would, of course, have to be modified to fit the needs of another institution:

1. The blank, "Variety in Foods Served", used in determining variety in dishes from day to day and from week to week.
2. The "job specification" sheets, used in observing the employees on the job.
3. The tabulations, used in determining daily and monthly food costs.

One technique which the writer felt could be improved upon was the "Check List for Evaluation of School Lunch Menus". Suggested improvements are:

1. Harmony, contrast, and balance should be omitted, for no objective method for checking these aesthetic requirements could be devised.
2. A space should be provided for staples under Form, A. P. In this study any staple was checked in the space allowed for "fresh, cooked".
3. Perhaps a new term should be added to the check list since a question was presented as where to check a slice of liver in considering shape. In the present study liver was marked "whole".
4. The word "stripped" under Shape might be changed to "cut in strips", since the terminology was questioned.
5. The differentiation of textures, especially "coarse" and "crisp", should be reconsidered for another situation. Some persons thought raw salads should be classified "crisp" rather than "coarse".

In validating this check list the writer would recommend the use of it

for one week, the tabulation and examination of results, and the revision of the check list, repeating these three processes as often as necessary.

Three problems in this particular school were pointed out by the present study which need detailed study.

The survey of "Foods Eaten in Twenty-Four Hour Period" could well be conducted with closer supervision and at intervals interspersed with units in a correlated nutritional education program designed to encourage good food habits on the part of the pupils in each grade and their parents. Modification of the school lunch to supplement the foods eaten at home may be necessary.

Observation of plate waste, subjective as it was, proved satisfactory in this study, since waste for the whole school was not great. However, the writer felt that possibly the greatest waste was on the plates of the children of the kindergarten and the lower grades. This suggests a subjective study of the food waste on the plates of children in different grades, followed by a more objective study of the size of servings and plate waste for the particular grades where waste is greatest.

In the present study the aesthetic requirements of harmony, contrast, and balance were measured subjectively. The children, the most important group of all, were not given the opportunity to express their ideas on this subject. They might be asked to state food likes and dislikes within the food groups in which there were indications of inadequacy and suggest particular dishes which could be served on the school lunch plate. They might even be asked to suggest their favorite combinations of dishes. Thus one could develop menus which are adequate

and attractive according to the children and can be prepared with the available time, labor, and money.

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APPENDIXES

APPENDIX A

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>February 28, 1949</u>					
	<u>Baked</u>	<u>Glazed</u>	<u>Cabbage</u>	<u>Buttered</u>	<u>Raisin</u>	<u>Milk</u>
	<u>Luncheon</u>	<u>Sweet</u>	<u>Pepper</u>	<u>Roll</u>	<u>Cobbler</u>	
	<u>Loaf</u>	<u>Potatoes</u>	<u>Salad</u>			
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓	✓	
White-cream						✓
Yellow-red		✓				
Flavor						
Bland				✓		✓
Salty	✓					
Strong			✓			
Sweet		✓			✓	
Tart						
Form, A. P.						
Baked				✓		
Canned	✓					
Dried					✓	
Fresh						
Cooked		✓			✓	
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square	<u>Square</u>	<u>Whole</u>		<u>Round</u>	<u>Square</u>	
Stripped, diced, shredded, grated, in pieces			<u>Shredded</u>			
Texture						
Coarse		✓			✓	
Crisp					✓	
Firm	✓					
Fluid						✓
Smooth		✓		✓		
Soft						
Method of preparation						
Baked, broiled, fried	<u>Baked</u>	<u>Baked</u>			<u>Baked</u>	
Creamed						
Raw			✓			
Steamed, stewed, boiled		<u>Steamed</u>			<u>Steamed</u>	
Used as purchased						✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served <u>February 28, 1949</u>						:
	:	Baked	Glazed	Cabbage	Buttered	Raisin	Milk	:
	:	Luncheon	Sweet	Pepper	Roll	Cobbler		:
	:	Loaf	Potatoes	Salad				:
Person responsible for preparation	:	:	:	:	:	:	:	:
Head Cook	:	✓	✓			✓		:
Assistant Cook	:			✓	✓	✓		:
Dishwasher	:							:
Time served	:	11:20	11:20	11:20	11:20	11:30	11:20	:
Adequacy	:	:	:	:	:	:	:	:
Quantity	:Total	:	:	:	:	:	:	:
required by	:quan-	:	:	:	:	:	:	:
the National	:tity	:	:	:	:	:	:	:
School Lunch	:served	:	:	:	:	:	:	:
Act ¹	:per	:	:	:	:	:	:	:
	:person:	:	:	:	:	:	:	:
Meat, fish,	:	:	:	:	:	:	:	:
cheese or	: Luncheon	:	:	:	:	:	:	:
poultry	: Loaf	:	:	:	:	:	:	:
(2 oz.);	: 1½ oz. 1½ oz.	:	:	:	:	:	:	:
egg (1);	:	:	:	:	:	:	:	:
legumes	:	:	:	:	:	:	:	:
(½ c.);	:	:	:	:	:	:	:	:
peanut	:	:	:	:	:	:	:	:
butter	:	:	:	:	:	:	:	:
(¼ c.)	:	:	:	:	:	:	:	:
Fruit and/	:	Sweet	Green		Raisins			:
or vege-	:	Potatoes	Pepper		¼ c.			:
table	: 11/12 c.	: 1/3 c.	: Cabbage					:
(¾ c.)	:	:	: 1/3 c.					:
Bread, en-	:	:	:	:				:
riched	: 1+	:	:	:	1	Crust		:
(1 serving):	:	:	:	:				:
Milk	: 1/2 pt.	:	:	:			1/2 pt.	:
(½ pt.)	:	:	:	:				:
Butter or	:	:	:	:				:
fortified	: 2 tsp.	: 1/4 tsp.	:	1½ tsp.	1/4 tsp.			:
substitute:	:	:	:					:
(2 tsp.)	:	:	:					:

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 1, 1949</u>					
	<u>Corned</u>	<u>Buttered</u>	<u>Mixed</u>	<u>Buttered</u>	<u>Apple-</u>	<u>Milk</u>
	<u>Beef</u>	<u>Corn</u>	<u>Vegetable</u>	<u>Whole Wheat</u>	<u>sauce</u>	
	<u>Hash</u>		<u>Salad</u>	<u>Bread</u>		
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓		
White-cream					✓	✓
Yellow-red		✓				
Flavor						
Bland		✓		✓		✓
Salty	✓					
Strong			✓			
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned	✓	✓			✓	
Dried						
Fresh						
Cooked						
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed			✓			
Mound, round,						
whole, square	<u>Mound</u>			<u>Square</u>	<u>Mound</u>	
Stripped, diced,						
shredded, grated,						
in pieces		<u>In Pieces</u>				
Texture						
Coarse		✓	✓			
Crisp						
Firm						
Fluid						✓
Smooth				✓	✓	
Soft	✓					
Method of preparation						
Baked, broiled, fried						
Creamed	✓					
Raw			✓			
Steamed, stewed,						
boiled		<u>Boiled</u>				
Used as purchased				✓	✓	✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served <u>March 1, 1949</u>						:
	:	Corned	Buttered	Mixed	Buttered	Apple-	Milk	:
	:	Beef	Corn	Vegetable	Whole Wheat	sauce		:
	:	Hash		Salad	Bread			:
Person responsible for	:	:	:	:	:	:	:	:
preparation	:	:	:	:	:	:	:	:
Head Cook	:	✓	✓					:
Assistant Cook	:			✓	✓	✓		:
Dishwasher	:							:
Time served	:	11:20	11:20	11:20	11:20	11:20	11:20	:
Adequacy	:	:	:	:	:	:	:	:
Quantity	:Total	:	:	:	:	:	:	:
required by	:quan-	:	:	:	:	:	:	:
the National	:tity	:	:	:	:	:	:	:
School Lunch	:served:	:	:	:	:	:	:	:
Act ¹	:per	:	:	:	:	:	:	:
	:person:	:	:	:	:	:	:	:
Meat, fish,	:	:	:	:	:	:	:	:
cheese or	:	Beef	:	:	:	:	:	:
poultry	:	(Beef	:	:	:	:	:	:
(2 oz.);	:	Hash)	:	:	:	:	:	:
egg (1);	: 1 oz. 1 oz.	:	:	:	:	:	:	:
legumes	:	:	:	:	:	:	:	:
($\frac{1}{2}$ c.);	:	:	:	:	:	:	:	:
peanut	:	:	:	:	:	:	:	:
butter	:	:	:	:	:	:	:	:
($\frac{1}{4}$ c.)	:	:	:	:	:	:	:	:
Fruit and/	:	:	:	:	:	:	:	:
or vege-	: $\frac{11}{12}$ c.	Corn	Vegetables	Apple-	:	:	:	:
table	:	$\frac{1}{3}$ c.	$\frac{1}{3}$ c.	sauce	:	:	:	:
($\frac{3}{4}$ c.)	:	:	:	$\frac{1}{4}$ c.	:	:	:	:
Bread, en-	:	:	:	:	:	:	:	:
riched	: 1	:	:	1	:	:	:	:
(1 serving):	:	:	:	:	:	:	:	:
Milk	: $\frac{1}{2}$ pt. + White	:	:	:	:	:	$\frac{1}{2}$ pt.	:
($\frac{1}{2}$ pt.)	: Sauce +	:	:	:	:	:	:	:
Butter or	:	:	:	:	:	:	:	:
fortified	: 2 tsp. $\frac{1}{4}$ tsp. $\frac{1}{4}$ tsp.	:	:	1 $\frac{1}{2}$ tsp.	:	:	:	:
substitute:	:	:	:	:	:	:	:	:
(2 tsp.)	:	:	:	:	:	:	:	:

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 2, 1949</u>					
	<u>Fish</u>	<u>Buttered</u>	<u>Carrots</u>	<u>Combread</u>	<u>Dried</u>	<u>Milk</u>
	<u>Patties</u>	<u>Potatoes</u>	<u>Raisin</u>		<u>Peaches</u>	
			<u>Salad</u>			
Harmony, contrast, variety, balance	:	:	:	:	:	:
Color	:	:	:	:	:	:
Green	:	:	:	:	:	:
Purple	:	:	:	:	:	:
Tan-brown	✓	:	:	✓	:	:
White-cream	:	✓	:	:	:	✓
Yellow-red	:	:	✓	:	✓	:
Flavor	:	:	:	:	:	:
Bland	:	✓	:	✓	:	✓
Salty	✓	:	:	:	:	:
Strong	:	:	:	:	:	:
Sweet	:	:	✓	:	✓	:
Tart	:	:	:	:	:	:
Form, A. P.	:	:	:	:	:	:
Baked	:	:	:	:	:	:
Canned	✓	:	:	:	:	:
Dried	:	:	✓	:	✓	:
Fresh	:	:	:	:	:	:
Cooked	:	✓	:	✓	:	:
Uncooked	:	:	✓	:	:	✓
Frozen	✓	:	:	:	:	:
Shape	:	:	:	:	:	:
Fluid	:	:	:	:	:	✓
Mixed	:	:	✓	:	:	:
Mound, round, whole, square	:	:	:	:	:	:
<u>Round</u> <u>Whole</u> <u>Square</u>	:	:	:	:	:	:
Stripped, diced, shredded, grated, in pieces	:	:	:	:	<u>In Pieces</u>	:
Texture	:	:	:	:	:	:
Coarse	:	:	✓	✓	:	:
Crisp	:	:	:	:	:	:
Firm	✓	:	:	:	:	:
Fluid	:	:	:	:	:	✓
Smooth	:	✓	:	:	:	:
Soft	:	:	:	:	✓	:
Method of preparation	:	:	:	:	:	:
Baked, broiled, fried	<u>Baked</u>	:	:	<u>Baked</u>	:	:
Creamed	:	:	:	:	:	:
Raw	:	:	✓	:	:	:
Steamed, stewed, boiled	:	<u>Steamed</u>	:	:	<u>Stewed</u>	:
Used as purchased	:	:	:	:	:	✓
Warmed	:	:	:	:	:	:

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 3, 1949</u>					
	<u>Meat</u>	<u>Mashed</u>	<u>Green</u>	<u>Buttered</u>	<u>Ginger-</u>	<u>Milk</u>
	<u>Loaf,</u>	<u>Potatoes</u>	<u>Peas</u>	<u>Roll</u>	<u>bread</u>	
	<u>Gravy</u>					
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓	✓	
White-cream		✓				✓
Yellow-red						
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned			✓			
Dried						
Fresh						
Cooked	✓	✓			✓	
Uncooked						✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round,						
whole, square	<u>Square</u>	<u>Mound</u>		<u>Round</u>	<u>Square</u>	
Stripped, diced,						
shredded, grated,						
in pieces		<u>In Pieces</u>				
Texture						
Coarse						
Crisp						
Firm	✓		✓			
Fluid						✓
Smooth		✓		✓	✓	
Soft						
Method of preparation						
Baked, broiled, fried	<u>Baked</u>				<u>Baked</u>	
Creamed						
Raw						
Steamed, stewed,						
boiled		<u>Steamed</u>	<u>Boiled</u>			
Used as purchased						✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 4, 1949</u>					
	<u>Franks</u>	<u>Baked</u>	<u>Cabbage</u>	<u>Buttered</u>	<u>Chocolate</u>	<u>Milk</u>
	<u>au</u>	<u>Potatoes</u>	<u>Apple</u>	<u>Whole Wheat</u>	<u>Pudding</u>	
	<u>Gratin</u>		<u>Salad</u>	<u>Bread</u>		
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓	✓		✓	✓	
White-cream						✓
Yellow-red			✓			
Flavor						
Bland		✓		✓		✓
Salty	✓					
Strong			✓			
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned						
Dried					✓	
Fresh						
Cooked	✓	✓				
Uncooked			✓			✓
Frozen						
Shape						
Fluid	✓					✓
Mixed			✓			
Mound, round, whole, square	<u>Whole</u>	<u>Whole</u>		<u>Square</u>	<u>Mound</u>	
Stripped, diced, shredded, grated, in pieces						
Texture						
Coarse			✓			
Crisp						
Firm	✓					
Fluid						✓
Smooth		✓		✓		
Soft					✓	
Method of preparation						
Baked, broiled, fried		<u>Baked</u>				
Creamed	✓					
Raw			✓			
Steamed, stewed, boiled	<u>Boiled</u>	<u>Steamed</u>			<u>Boiled</u>	
Used as purchased				✓		✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 4, 1949</u>					
		Franks	Baked	Cabbage	Buttered	Chocolate	Milk
		au	Potatoes	Apple	Whole Wheat	Pudding	
		Gratin		Salad	Bread		
Person responsible for preparation							
Head Cook		✓	✓				
Assistant Cook				✓	✓	✓	
Dishwasher							
Time served		11:20	11:20	11:20	11:20	11:20	11:20
Adequacy							
Quantity required by the National School Lunch Act ¹	Total						
	quantity						
	served						
	per person						
Meat, fish, cheese or poultry (2 oz.); egg (1); legumes ($\frac{1}{2}$ c.); peanut butter ($\frac{1}{4}$ c.)	Franks: $1\frac{1}{2}$ oz. Cheese: +						
Fruit and/or vegetable ($\frac{3}{4}$ c.)	Potatoes $\frac{1}{2}$ c. Cabbage: Apples $\frac{1}{3}$ c.						
Bread, enriched (1 serving)	1				1		
Milk ($\frac{1}{2}$ pt.)	$\frac{1}{2}$ pt. Milk +					Milk +	$\frac{1}{2}$ pt.
Butter or fortified substitute (2 tsp.)	$1\frac{1}{8}$ tsp. $\frac{1}{8}$ tsp. $\frac{1}{4}$ tsp.					$1\frac{1}{2}$ tsp.	

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 7, 1949</u>					
	<u>Ham</u>	<u>Buttered</u>	<u>Green</u>	<u>Buttered</u>	<u>Apple</u>	<u>Milk</u>
	<u>Salad</u>	<u>Potatoes</u>	<u>Peas</u>	<u>Whole Wheat</u>	<u>Cobbler</u>	
				<u>Bread</u>		
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓	✓	
White-cream		✓				✓
Yellow-red						
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned	✓		✓			
Dried					✓	
Fresh						
Cooked		✓			✓	
Uncooked						✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round,						
whole, square	<u>Mound</u>	<u>Whole</u>		<u>Square</u>	<u>Square</u>	
Stripped, diced,						
shredded, grated,						
in pieces			<u>In Pieces</u>			
Texture						
Coarse	✓					
Crisp					✓	
Firm			✓			
Fluid						✓
Smooth		✓		✓		
Soft					✓	
Method of preparation						
Baked, broiled, fried					<u>Baked</u>	
Creamed						
Raw						
Steamed, stewed,						
boiled		<u>Steamed</u>	<u>Boiled</u>		<u>Stewed</u>	
Used as purchased	✓			✓		✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 7, 1949</u>						
		Ham	Buttered	Green	Buttered	Apple	Milk	
		Salad	Potatoes	Peas	Whole Wheat	Cobbler		
					Bread			
Person responsible for preparation								
Head Cook		✓	✓	✓		✓		
Assistant Cook		✓			✓	✓		
Dishwasher			✓					
Time served		11:20	11:20	11:20	11:20	11:20	11:20	
Adequacy								
Quantity	Total							
required by	quan-							
the National	tity							
School Lunch	served							
Act ¹	per							
	person:							
Meat, fish,	Spiced							
cheese or	1 1/2 oz.	Ham						
poultry	1 1/2 oz.							
(2 oz.);		Eggs						
egg (1);	+							
legumes								
(1/2 c.);								
peanut								
butter								
(1/2 c.)								
Fruit and/								
or vege-	1/2 c.	Pickles	Potatoes	Peas		Apples		
table	+	+	1/3 c.	1/3 c.		1/4 c.		
(3/4 c.)								
Bread, en-								
riched	1 +				1	Crust		
(1 serving):						+		
Milk								
(1/2 pt.)	1/2 pt.						1/2 pt.	
Butter or								
fortified								
substitute:	2 tsp.	1 tsp.	1/4 tsp.	2/7 tsp.				
(2 tsp.)								

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 8, 1949</u>					
	Hamburger	Mashed	Cole	Buttered	Prune	Milk
	Patties	Potatoes	Slaw	Roll	Plums	
	Gravy					
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple					✓	
Tan-brown	✓			✓		
White-cream		✓				✓
Yellow-red						
Flavor						
Bland		✓		✓		✓
Salty	✓					
Strong			✓			
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned					✓	
Dried						
Fresh						
Cooked	✓	✓				
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square	Round	Mound		Round	Whole	
Stripped, diced, shredded, grated, in pieces			Shredded			
Texture						
Coarse			✓			
Crisp						
Firm	✓				✓	
Fluid						✓
Smooth		✓		✓		
Soft						
Method of preparation						
Baked, broiled, fried	Baked					
Creamed						
Raw			✓			
Steamed, stewed, boiled		Steamed				
Used as purchased					✓	✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served	March 8, 1949	:
	:	Hamburger	Mashed	Cole
	:	Patties	Potatoes	Slaw
	:	Gravy		
Person responsible for preparation	:			
Head Cook	:	✓	✓	
Assistant Cook	:		✓	✓
Dishwasher	:		✓	
Time served	:	11:20	11:21	11:20
Adequacy	:			
Quantity	:	Total	:	
required by	:	quan-	:	
the National	:	tity	:	
School Lunch	:	served	:	
Act ¹	:	per	:	
	:	person	:	
Meat, fish,:	:	Beef	:	
cheese or	:	1 1/2 oz.	:	
poultry	:	Egg	:	
(2 oz.);	:	Powder	:	
egg (1);	:	+	:	
legumes	:		:	
(1/2 c.);	:		:	
peanut	:		:	
butter	:		:	
(1/4 c.)	:		:	
Fruit and/	:		:	
or vege-	:	Onions	:	
table	:	Potatoes	:	
(3/4 c.)	:	Cabbage	:	
Bread, en-	:		:	
riched	:	Crumba	:	
(1 serving):	:	+	:	
Milk	:	Milk	:	
(1/2 pt.)	:	+	:	
Butter or	:		:	
fortified	:		:	
substitute:	:	1 1/2 tsp.	:	
(2 tsp.)	:		:	

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 9, 1949</u>					
	<u>Braised</u>	<u>Buttered</u>	<u>Shredded</u>	<u>Buttered</u>	<u>Spiced</u>	<u>Milk</u>
	<u>Liver</u>	<u>Corn</u>	<u>Lettuce</u>	<u>Whole Wheat</u>	<u>Peaches</u>	
				<u>Bread</u>		
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓		
White-cream						✓
Yellow-red		✓			✓	
Flavor						
Bland		✓	✓	✓		✓
Salty						
Strong	✓					
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned		✓			✓	
Dried						
Fresh						
Cooked	✓					
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square						
<u>Round</u>				<u>Square</u>		
Stripped, diced, shredded, grated, in pieces						
		<u>In Pieces</u>	<u>Shredded</u>		<u>In Pieces</u>	
Texture						
Coarse		✓	✓			
Crisp						
Firm	✓				✓	
Fluid						✓
Smooth				✓		
Soft						
Method of preparation						
Baked, broiled, fried	<u>Fried</u>					
Creamed						
Raw			✓			
Steamed, stewed, boiled		<u>Boiled</u>				
Used as purchased				✓		✓
Warmed					✓	

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 9, 1949</u>						
		Braised	Buttered	Shredded	Buttered	Spiced	Milk	
		Liver	Corn	Lettuce	Whole Wheat	Peaches		
					Bread			
Person responsible for preparation								
Head Cook		✓	✓					
Assistant Cook				✓	✓	✓		
Dishwasher								
Time served		11:20	11:20	11:20	11:20	11:20	11:20	
Adequacy								
Quantity	Total							
required by	quan-							
the National	tity							
School Lunch	served							
Act ¹	per							
	person:							
Meat, fish,	Liver							
cheese or	2 oz. 2 oz.							
poultry								
(2 oz.);								
egg (1);								
legumes								
($\frac{1}{2}$ c.);								
peanut								
butter								
($\frac{1}{4}$ c.)								
Fruit and/								
or vege-	$\frac{1}{12}$ c. +++ Onions ⁺							
table	Carrots ⁺							
($\frac{3}{4}$ c.)	Tomatoes ⁺							
Bread, en-								
riched	1				1			
(1 serving)								
Milk								
($\frac{1}{2}$ pt.)	$\frac{1}{2}$ pt.							$\frac{1}{2}$ pt.
Butter or								
fortified								
substitute:	1 # tsp.		$\frac{1}{4}$ tsp.		1 $\frac{1}{2}$ tsp.			
(2 tsp.)								

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 10, 1949</u>					
	<u>Baked</u>	<u>Buttered</u>	<u>Carrots</u>	<u>Buttered</u>	<u>Spice</u>	<u>Milk</u>
	<u>Beans</u>	<u>Kale</u>	<u>Raisin</u>	<u>Roll</u>	<u>Cake</u>	
			<u>Salad</u>			
Harmony, contrast, variety, balance						
Color						
Green		✓				
Purple						
Tan-brown	✓			✓	✓	
White-cream						✓
Yellow-red			✓			
Flavor						
Bland				✓		✓
Salty						
Strong		✓				
Sweet	✓		✓		✓	
Tart						
Form, A. P.						
Baked				✓		
Canned	✓					
Dried			✓			
Fresh						
Cooked					✓	
Uncooked			✓			✓
Frozen		✓				
Shape						
Fluid						✓
Mixed			✓			
Mound, round, whole, square		<u>Mound</u>		<u>Round</u>	<u>Square</u>	
Stripped, diced, shredded, grated, in pieces		<u>In Pieces</u>				
Texture						
Coarse		✓	✓			
Crisp						
Firm	✓					
Fluid						✓
Smooth				✓	✓	
Soft						
Method of preparation						
Baked, broiled, fried	<u>Baked</u>				<u>Baked</u>	
Creamed						
Raw			✓			
Steamed, stewed, boiled		<u>Steamed</u>				
Used as purchased						✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served <u>March 10, 1949</u>						:
	:	<u>Baked</u>	<u>Buttered</u>	<u>Carrots</u>	<u>Buttered</u>	<u>Spice</u>	<u>Milk</u>	:
	:	<u>Beans</u>	<u>Kale</u>	<u>Raisin</u>	<u>Roll</u>	<u>Cake</u>		:
	:			<u>Salad</u>				:
Person responsible for preparation	:	:	:	:	:	:	:	:
Head Cook	:	✓	✓	:	:	✓	:	:
Assistant Cook	:	:	:	✓	✓	✓	:	:
Dishwasher	:	:	:	:	:	:	:	:
Time served	:	<u>11:20</u>	<u>11:20</u>	<u>11:20</u>	<u>11:20</u>	<u>11:20</u>	<u>11:20</u>	:
Adequacy	:	:	:	:	:	:	:	:
Quantity	:	Total	:	:	:	:	:	:
required by	:	quan-	:	:	:	:	:	:
the National	:	tity	:	:	:	:	:	:
School Lunch	:	served:	:	:	:	:	:	:
Act ¹	:	per	:	:	:	:	:	:
	:	person:	:	:	:	:	:	:
Meat, fish,	:	:	:	:	:	:	:	:
cheese or	:	$\frac{1}{2}$ c. +	Beans	:	:	Egg	:	:
poultry	:	$\frac{1}{2}$ c.	$\frac{1}{2}$ c.	:	:	Powder	:	:
(2 oz.);	:	:	:	:	:	+	:	:
egg (1);	:	:	:	:	:	:	:	:
legumes	:	:	:	:	:	:	:	:
($\frac{1}{2}$ c.);	:	:	:	:	:	:	:	:
peanut	:	:	:	:	:	:	:	:
butter	:	:	:	:	:	:	:	:
($\frac{1}{4}$ c.)	:	:	:	:	:	:	:	:
Fruit and/	:	:	:	:	:	Peaches	:	:
or vege-	:	$\frac{3}{4}$ c. ++	Kale	Carrots	:	+	:	:
table	:	$\frac{1}{4}$ c.	$\frac{1}{4}$ c.	Raisins	:	Prunes	:	:
($\frac{3}{4}$ c.)	:	:	$\frac{1}{2}$ c.		:	+	:	:
Bread, en-	:	:	:	:	:	Cake	:	:
riched	:	1 +	:	:	1	+	:	:
(1 serving):	:	:	:	:	:	:	:	:
Milk	:	:	:	:	:	:	:	:
($\frac{1}{2}$ pt.)	:	$\frac{1}{2}$ pt.	:	:	:	:	$\frac{1}{2}$ pt.	:
Butter or	:	:	:	:	:	:	:	:
fortified	:	:	$\frac{1}{4}$ tsp.	:	$\frac{1}{4}$ tsp.	1 $\frac{1}{2}$ tsp.	:	:
substitute:	:	2 tsp.	:	:	:	:	:	:
(2 tsp.)	:	:	:	:	:	:	:	:

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 11, 1949</u>					
	<u>Salmon</u>	<u>Creamed</u>	<u>Buttered</u>	<u>Cornbread</u>	<u>Lemon</u>	<u>Milk</u>
	<u>Loaf</u>	<u>Potatoes</u>	<u>Carrots</u>		<u>Custard</u>	
Harmony, contrast, variety, balance						
Color						
Green						
Purple						
Tan-brown	✓			✓		
White-cream		✓				✓
Yellow-red			✓		✓	
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet						
Tart					✓	
Form, A. P.						
Baked						
Canned	✓					
Dried						
Fresh						
Cooked		✓	✓	✓	✓	
Uncooked						✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square	<u>Square</u>			<u>Square</u>	<u>Mounds</u>	
Stripped, diced, shredded, grated, in pieces		<u>Diced</u>	<u>Stripped</u>			
Texture						
Coarse				✓		
Crisp						
Firm	✓		✓			
Fluid						✓
Smooth					✓	
Soft		✓				
Method of preparation						
Baked, broiled, fried	<u>Baked</u>			<u>Baked</u>		
Creamed		✓				
Raw						
Steamed, stewed, boiled		<u>Steamed</u>	<u>Steamed</u>		<u>Boiled</u>	
Used as purchased						✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 11, 1949</u>					
		<u>Salmon</u>	<u>Creamed</u>	<u>Buttered</u>	<u>Cornbread</u>	<u>Lemon</u>	<u>Milk</u>
		<u>Loaf</u>	<u>Potatoes</u>	<u>Carrots</u>		<u>Custard</u>	
Person responsible for preparation							
Head Cook		✓	✓	✓			
Assistant Cook					✓	✓	
Dishwasher			✓				
Time served		<u>11:20</u>	<u>11:20</u>	<u>11:20</u>	<u>11:22</u>	<u>11:20</u>	<u>11:20</u>
Adequacy							
Quantity	Total						
required by	quan-						
the National	tity						
School Lunch	served						
Act ¹	per						
	person						
Meat, fish,	+	<u>Fish</u>			<u>Egg</u>	<u>Egg</u>	
cheese or	<u>1 1/2 oz.</u>	<u>1 1/2 oz.</u>			<u>Powder</u>	<u>Powder</u>	
poultry		<u>Egg</u>			<u>+</u>	<u>+</u>	
(2 oz.);		<u>Powder</u>					
egg (1);		<u>+</u>					
legumes							
(1/2 c.);							
peanut							
butter							
(1/2 c.)							
Fruit and/						<u>Lemons</u>	
or vege-	<u>3/4 c.</u>	<u>Onions</u>	<u>Potatoes</u>	<u>Carrots</u>		<u>+</u>	
table		<u>+</u>	<u>1/2 c.</u>	<u>1/4 c.</u>			
(3/4 c.)							
Bread, en-							
riched	<u>1+</u>	<u>Crumbs</u>			<u>1</u>		
(1 serving)		<u>+</u>					
Milk	<u>1/2 pt.</u>		<u>Milk</u>			<u>Milk</u>	<u>1/2 pt.</u>
(1/2 pt.)			<u>+</u>			<u>+</u>	
Butter or							
fortified							
substitute	<u>2 tsp.</u>	<u>3/4 tsp.</u>	<u>1/4 tsp.</u>	<u>1 tsp.</u>			
(2 tsp.)							

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 14, 1949</u>					
	<u>Egg</u>	<u>Baked</u>	<u>Fruit -</u>	<u>Buttered</u>	<u>Pain Cake</u>	<u>Milk</u>
	<u>Salad</u>	<u>Potato</u>	<u>Vegetable</u>	<u>Whole Wheat</u>	<u>Orange</u>	
			<u>Salad</u>	<u>Bread</u>	<u>Sauce</u>	
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown		✓		✓	✓	
White-cream						✓
Yellow-red	✓					
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned						
Dried	✓					
Fresh						
Cooked	✓	✓			✓	
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed			✓			
Mound, round,						
whole, square	<u>Mound</u>	<u>Whole</u>		<u>Square</u>	<u>Square</u>	
Stripped, diced,						
shredded, grated,						
in pieces						
Texture						
Coarse	✓		✓			
Crisp						
Firm						
Fluid						✓
Smooth		✓		✓	✓	
Soft						
Method of preparation						
Baked, broiled, fried	<u>Fried</u>	<u>Baked</u>			<u>Baked</u>	
Creamed						
Raw			✓			
Steamed, stewed,						
boiled	<u>Boiled</u>	<u>Steamed</u>			<u>Boiled</u>	
Used as purchased				✓		✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 14, 1949</u>					
		<u>Egg</u>	<u>Baked</u>	<u>Fruit</u>	<u>Buttered</u>	<u>Plain Cake</u>	<u>Milk</u>
		<u>Salad</u>	<u>Potato</u>	<u>Vegetable</u>	<u>Whole Wheat</u>	<u>Orange</u>	
				<u>Salad</u>	<u>Bread</u>	<u>Sauce</u>	
Person responsible for preparation							
Head Cook		✓	✓			✓	
Assistant Cook		✓		✓	✓	✓	
Dishwasher							
Time served		<u>11:21</u>	<u>11:20</u>	<u>11:20</u>	<u>11:20</u>	<u>11:22</u>	<u>11:20</u>
Adequacy							
Quantity	Total						
required by	quan-						
the National	tity						
School Lunch	served:						
Act ¹	per						
	person:						
Meat, fish,		<u>Egg</u>				<u>Egg</u>	
cheese or	1 +	<u>1</u>				<u>Powder</u>	
poultry						<u>+</u>	
(2 oz.);							
egg (1);							
legumes							
($\frac{1}{2}$ c.);							
peanut							
butter							
($\frac{1}{4}$ c.)							
Fruit and/				<u>Lettuce</u>			
or vege-	$\frac{3}{4}$ c. ++	<u>Pickles</u>	<u>Potato</u>	<u>Apples</u>		<u>Orange</u>	
table		<u>+</u>	<u>$\frac{1}{2}$ c.</u>	<u>Bananas</u>		<u>+</u>	
($\frac{3}{4}$ c.)				<u>$\frac{1}{4}$ c.</u>			
Bread, en-						<u>Cake</u>	
riched	1 +				1	<u>+</u>	
(1 serving):							
Milk	$\frac{1}{2}$ pt. +					<u>Milk</u>	$\frac{1}{2}$ pt.
($\frac{1}{2}$ pt.)						<u>+</u>	
Butter or							
fortified	$1\frac{3}{4}$ tsp.		$\frac{1}{4}$ tsp.		$\frac{3}{4}$ tsp.	$\frac{3}{4}$ tsp.	
substitute:							
(2 tsp.)							

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 15, 1949</u>					
	<u>Baked</u>	<u>Escalloped</u>	<u>Buttered</u>	<u>Corn bread</u>	<u>Lemon</u>	<u>Milk</u>
	<u>Fish</u>	<u>Potatoes</u>	<u>Beets</u>		<u>Pie</u>	
Harmony, contrast, variety, balance						
Color						
Green						
Purple						
Tan-brown	✓			✓		
White-cream		✓				✓
Yellow-red			✓		✓	
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet						
Tart					✓	
Form, A. P.						
Baked						
Canned			✓			
Dried						
Fresh						
Cooked		✓		✓	✓	
Uncooked						✓
Frozen	✓					
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square	<u>Square</u>			<u>Square</u>	<u>Square</u>	
Stripped, diced, shredded, grated, in pieces		<u>In Pieces</u>	<u>In Pieces</u>			
Texture						
Coarse				✓		
Crisp					✓	
Firm	✓		✓			
Fluid						✓
Smooth					✓	
Soft		✓				
Method of preparation						
Baked, broiled, fried	<u>Baked</u>	<u>Baked</u>		<u>Baked</u>	<u>Baked</u>	
Creamed		✓				
Raw						
Steamed, stewed, boiled		<u>Steamed</u>	<u>Boiled</u>		<u>Boiled</u>	
Used as purchased						✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served <u>March 15, 1949</u>						:
	:	<u>Baked</u>	<u>Escalloped</u>	<u>Buttered</u>	<u>Cornbread</u>	<u>Lemon</u>	<u>Milk</u>	:
	:	<u>Fish</u>	<u>Potatoes</u>	<u>Beets</u>		<u>Pie</u>		:
Person responsible for preparation	:	:	:	:	:	:	:	:
Head Cook	:	✓	✓	✓		✓		:
Assistant Cook	:				✓	✓		:
Dishwasher	:		✓					:
Time served	:	11:20	11:22	11:20	11:20	11:25	11:20	:
Adequacy	:	:	:	:	:	:	:	:
Quantity	:Total	:	:	:	:	:	:	:
required by	:quan-	:	:	:	:	:	:	:
the National	:tity	:	:	:	:	:	:	:
School Lunch	:served:	:	:	:	:	:	:	:
Act ¹	:per	:	:	:	:	:	:	:
	:person:	:	:	:	:	:	:	:
Meat, fish,	:	<u>Fish</u>	:	:	<u>Egg</u>	<u>Egg</u>	:	:
cheese or	: ⁺⁺ 1 1/2 oz.	1 1/2 oz.	:	:	<u>Powder</u>	<u>Powder</u>	:	:
poultry	:	:	:	:	+	+	:	:
(2 oz.);	:	:	:	:		<u>Eggs</u>	:	:
egg (1);	:	:	:	:		+	:	:
legumes	:	:	:	:	:	:	:	:
(1/2 c.);	:	:	:	:	:	:	:	:
peanut	:	:	:	:	:	:	:	:
butter	:	:	:	:	:	:	:	:
(1/2 c.)	:	:	:	:	:	:	:	:
Fruit and/	:	:	:	:	:	:	:	:
or vege-	: ⁺ 3/4 c.	<u>Potatoes</u>	<u>Beets</u>	:	<u>Lemons</u>	:	:	:
table	: ⁺ 3/4 c.	1/2 c.	1/4 c.	:	+	:	:	:
(3/4 c.)	:	:	:	:	:	:	:	:
Bread, en-	:	:	:	:	:	:	:	:
riched	: 1 ⁺	:	:	:	1	<u>Crust</u>	:	:
(1 serving):	:	:	:	:		+	:	:
Milk	: ⁺⁺ 1/2 pt.	<u>Milk</u>	:	:	<u>Milk</u>	:	1/2 pt.	:
(1/2 pt.)	:	+	:	:	+	:	:	:
Butter or	:	:	:	:	:	:	:	:
fortified	:	:	:	:	:	:	:	:
substitute:	: 1/2 tsp.	3/4 tsp.	3/4 tsp.	:	:	+	:	:
(2 tsp.)	:	:	:	:	:	:	:	:

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 16, 1949</u>					
	<u>Swedish</u>	<u>Mashed</u>	<u>Green</u>	<u>Buttered</u>	<u>Glazed</u>	<u>Milk</u>
	<u>Meat</u>	<u>Potatoes</u>	<u>Peas</u>	<u>Rolls</u>	<u>Apples</u>	
	<u>Balls</u>					
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓	✓	
White-cream		✓				✓
Yellow-red						
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet					✓	
Tart						
Form, A. P.						
Baked				✓		
Canned			✓			
Dried					✓	
Fresh						
Cooked	✓	✓				
Uncooked						✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round,						
whole, square	<u>Round</u>	<u>Mound</u>		<u>Round</u>	<u>Mound</u>	
Stripped, diced,						
shredded, grated,						
in pieces			<u>In Pieces</u>			
Texture						
Coarse						
Crisp						
Firm	✓		✓			
Fluid						✓
Smooth		✓		✓		
Soft					✓	
Method of preparation						
Baked, broiled, fried	<u>Fried</u>					
Creamed						
Raw						
Steamed, stewed,						
boiled		<u>Steamed</u>	<u>Boiled</u>		<u>Stewed</u>	
Used as purchased						✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 16, 1949</u>						
		Swedish	Mashed	Green	Buttered	Glazed	Milk	
		Meat	Potatoes	Peas	Rolls	Apples		
		Balls						
Person responsible for preparation								
Head Cook		✓	✓	✓				
Assistant Cook					✓	✓		
Dishwasher			✓					
Time served		11:20	11:20	11:20	11:20	11:20	11:20	
Adequacy								
Quantity	Total							
required by	quantity							
the National	quantity							
School Lunch	served							
Act ¹	per							
	person							
Meat, fish,	Beef							
cheese or	1 $\frac{3}{4}$ oz.							
poultry	Egg							
(2 oz.);	Powder							
egg (1);	+							
legumes								
($\frac{1}{2}$ c.);								
peanut								
butter								
($\frac{1}{4}$ c.)								
Fruit and/								
or vege-	Tomatoes							
table	12 c.							
($\frac{3}{4}$ c.)	+							
Bread, en-								
riched	1*							
(1 serving):	Crumbs							
Milk	+							
($\frac{1}{2}$ pt.)	$\frac{1}{2}$ pt.							
Butter or								
fortified								
substitute:	2 tsp.							
(2 tsp.)								

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 17, 1949</u>					
	Hot Roast	Glazed	Cabbage	Buttered	Fruit	Milk
	Beef	Sweet	Pepper	Whole Wheat	Compote	
	Sandwich	Potatoes	Salad	Bread		
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓	✓	
White-cream						✓
Yellow-red		✓				
Flavor						
Bland				✓		✓
Salty	✓					
Strong			✓			
Sweet		✓			✓	
Tart						
Form, A. P.						
Baked				✓		
Canned						
Dried					✓	
Fresh						
Cooked	✓	✓				
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed					✓	
Mound, round, whole, square	Square	Whole		Square		
Stripped, diced, shredded, grated, in pieces						
			Shredded			
Texture						
Coarse			✓			
Crisp						
Firm	✓				✓	
Fluid						✓
Smooth		✓		✓		
Soft					✓	
Method of preparation						
Baked, broiled, fried	Baked	Baked				
Creamed						
Raw			✓			
Steamed, stewed, boiled		Steamed			Stewed	
Used as purchased				✓		✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served <u>March 17, 1949</u>					
	:	Hot Roast	: Glazed	: Cabbage	: Buttered	: Fruit	: Milk
	:	Beef	: Sweet	: Pepper	: Whole Wheat	: Compote	:
	:	Sandwich	: Potatoes	: Salad	: Bread	:	:
Person responsible for preparation	:	:	:	:	:	:	:
Head Cook	:	✓	✓	:	:	:	:
Assistant Cook	:	:	:	✓	✓	✓	:
Dishwasher	:	:	:	:	:	:	:
Time served	:	11:20	11:20	11:20	11:20	11:20	11:20
Adequacy	:	:	:	:	:	:	:
Quantity	: Total	:	:	:	:	:	:
required by	: quan-	:	:	:	:	:	:
the National	: tity	:	:	:	:	:	:
School Lunch	: served	:	:	:	:	:	:
Act ¹	: per	:	:	:	:	:	:
	: person	:	:	:	:	:	:
Meat, fish,	: Beef	:	:	:	:	:	:
cheese or	: 1 1/2 oz.	: 1 1/2 oz.	:	:	:	:	:
poultry	:	:	:	:	:	:	:
(2 oz.);	:	:	:	:	:	:	:
egg (1);	:	:	:	:	:	:	:
legumes	:	:	:	:	:	:	:
(1/2 c.);	:	:	:	:	:	:	:
peanut	:	:	:	:	:	:	:
butter	:	:	:	:	:	:	:
(1/2 c.)	:	:	:	:	:	:	:
Fruit and/	:	:	Sweet	Cabbage	:	Dried	:
or vege-	: 1/2 c.	:	Potatoes	Pepper	:	Fruits	:
table	:	:	1/3 c.	1/3 c.	:	1/4 c.	:
(3/4 c.)	:	:	:	:	:	:	:
Bread, en-	:	:	:	:	:	:	:
riched	: 1	:	:	:	1	:	:
(1 serving):	:	:	:	:	:	:	:
Milk	:	:	:	:	:	:	1/2 pt.
(1/2 pt.)	: 1/2 pt.	:	:	:	:	:	:
Butter or	:	:	:	:	:	:	:
fortified	:	:	:	:	:	:	:
substitute:	1 1/2 tsp.	:	1/4 tsp.	:	1 1/2 tsp.	:	:
(2 tsp.)	:	:	:	:	:	:	:

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 18, 1949</u>					
	<u>Liver</u>	<u>Buttered</u>	<u>Carrots</u>	<u>Cornbread</u>	<u>Fruit</u>	<u>Milk</u>
	<u>Loaf,</u>	<u>Potatoes</u>	<u>Raisin</u>		<u>Bars</u>	
	<u>Gravy</u>		<u>Saled</u>			
Harmony, contrast,						
variety, balance						
Color						
Green						
Purple						
Tan-brown	✓			✓	✓	
White-cream		✓				✓
Yellow-red			✓			
Flavor						
Bland		✓		✓		✓
Salty						
Strong	✓					
Sweet			✓		✓	
Tart						
Form, A. P.						
Baked						
Canned						
Dried			✓		✓	
Fresh						
Cooked	✓	✓		✓	✓	
Uncooked			✓			✓
Frozen						
Shape						
Fluid						✓
Mixed			✓			
Mound, round,						
whole, square	<u>Whole</u>	<u>Whole</u>		<u>Square</u>	<u>Whole</u>	✓
Stripped, diced,						
shredded, grated,						
in pieces						
Texture						
Coarse			✓	✓		
Crisp						
Firm	✓				✓	
Fluid						✓
Smooth		✓				
Soft						
Method of preparation						
Baked, broiled, fried	<u>Fried</u>			<u>Baked</u>	<u>Baked</u>	
Creamed						
Raw			✓			
Steamed, stewed,						
boiled		<u>Steamed</u>				
Used as purchased						✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider	:	Dishes to Be Served	March 18, 1949	:	:	:	:	:	:
	:	Liver	Buttered	Carrots	Cornbread	Fruit	Milk	:	:
	:	Loaf,	Potatoes	Raisin	:	Bars	:	:	:
	:	Gravy	:	Salad	:	:	:	:	:
Person responsible for preparation	:	:	:	:	:	:	:	:	:
Head Cook	:	✓	✓	:	✓	:	:	:	:
Assistant Cook	:	:	:	✓	:	✓	:	:	:
Dishwasher	:	:	✓	:	:	:	:	:	:
Time served	:	11:20	11:20	11:20	11:20	11:20	11:20	:	:
Adequacy	:	:	:	:	:	:	:	:	:
Quantity	:	Total	:	:	:	:	:	:	:
required by	:	quan-	:	:	:	:	:	:	:
the National	:	tity	:	:	:	:	:	:	:
School Lunch	:	served:	:	:	:	:	:	:	:
Act ¹	:	per	:	:	:	:	:	:	:
	:	person:	:	:	:	:	:	:	:
Meat, fish,	:	+++ Liver	:	:	:	Egg	Egg	:	:
cheese or	:	1½ oz.	1½ oz.	:	:	Powder	Powder	:	:
poultry	:	:	Egg	:	:	+	+	:	:
(2 oz.);	:	:	Powder	:	:	:	:	:	:
egg (1);	:	:	+	:	:	:	:	:	:
legumes	:	:	:	:	:	:	:	:	:
(½ c.);	:	:	:	:	:	:	:	:	:
peanut	:	:	:	:	:	:	:	:	:
butter	:	:	:	:	:	:	:	:	:
(½ c.)	:	:	:	:	:	:	:	:	:
Fruit and/	:	:	:	:	:	:	:	:	:
or vege-	:	+++ Onions	Potatoes	Carrots	:	Dried	:	:	:
table	:	¾ c.	+	½ c.	Raisins	Fruit	:	:	:
(¾ c.)	:	:	:	¼ c.	:	+	:	:	:
Bread, en-	:	:	:	:	:	:	:	:	:
riched	:	1+	:	:	:	1	Bar	:	:
(1 serving):	:	:	:	:	:	:	+	:	:
Milk	:	:	:	:	:	Milk	:	:	:
(½ pt.)	:	½ pt.	:	:	:	+	:	½ pt.	:
Butter or	:	:	:	:	:	:	:	:	:
fortified	:	:	:	:	:	:	:	:	:
substitute:	:	1½ tsp.	¾ tsp.	:	:	¾ tsp.	:	:	:
(2 tsp.)	:	:	:	:	:	:	:	:	:

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 21, 1949</u>					
	<u>Creamed</u>	<u>Buttered</u>	<u>Mixed</u>	<u>Buttered</u>	<u>Apple</u>	<u>Milk</u>
	<u>Salmon</u>	<u>Corn</u>	<u>Vegetable</u>	<u>Roll</u>		
			<u>Salad</u>			
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown				✓		
White-cream	✓					✓
Yellow-red		✓			✓	
Flavor						
Bland		✓		✓	✓	✓
Salty	✓					
Strong			✓			
Sweet						
Tart						
Form, A. P.						
Baked				✓		
Canned	✓	✓				
Dried						
Fresh						
Cooked	✓					
Uncooked			✓		✓	✓
Frozen						
Shape						
Fluid	✓ (thick)					✓
Mixed			✓			
Mound, round,						
whole, square				<u>Round</u>	<u>Whole</u>	
Stripped, diced,						
shredded, grated,						
in pieces		<u>In Pieces</u>				
Texture						
Coarse		✓	✓			
Crisp						
Firm					✓	
Fluid						✓
Smooth				✓		
Soft	✓					
Method of preparation						
Baked, broiled, fried						
Creamed	✓					
Raw			✓		✓	
Steamed, stewed,						
boiled		<u>Boiled</u>				
Used as purchased						✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 21, 1949</u>					
		<u>Creamed</u>	<u>Buttered</u>	<u>Mixed</u>	<u>Buttered</u>	<u>Apple</u>	<u>Milk</u>
		<u>Salmon</u>	<u>Corn</u>	<u>Vegetable</u>	<u>Roll</u>		
				<u>Salad</u>			
Person responsible for preparation							
Head Cook		✓	✓				
Assistant Cook				✓	✓	✓	
Dishwasher							
Time served		11:20	11:20	11:20	11:20	11:20	11:20
Adequacy							
Quantity	:Total						
required by	:quan-						
the National	:tity						
School Lunch	:served						
Act ¹	:per						
	:person						
Meat, fish,	: <u>Salmon</u>						
cheese or	: <u>1 1/2 oz.</u>						
poultry	:						
(2 oz.);	:						
egg (1);	:						
legumes	:						
(1/2 c.);	:						
peanut	:						
butter	:						
(1/2 c.)	:						
Fruit and/	:						
or vege-	:		<u>Corn</u>	<u>Vegetable</u>		<u>Apple</u>	
table	: <u>1 1/2 c.</u>		<u>1/2 c.</u>	<u>1/2 c.</u>		<u>1/2 c.</u>	
(3/4 c.)	:						
Bread, en-	:						
riched	: <u>1</u>				<u>1</u>		
(1 serving):	:						
Milk	: <u>1/2 pt.</u>	<u>Milk</u>					<u>1/2 pt.</u>
(1/2 pt.)	:	<u>+</u>					
Butter or	:						
fortified	:						
substitute:	<u>1 3/4 tsp.</u>	<u>3/4 tsp.</u>	<u>1/4 tsp.</u>		<u>3/4 tsp.</u>		
(2 tsp.)	:						

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 22, 1949</u>					
	Meat	Mashed	Green	Cornbread	Fruit	Milk
	Loaf,	Potatoes	Peas		Gelatin	
	Gravy					
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓		
White-cream		✓				✓
Yellow-red					✓	
Flavor						
Bland		✓	✓	✓		✓
Salty	✓					
Strong						
Sweet					✓	
Tart						
Form, A. P.						
Baked						
Canned			✓		✓	
Dried						
Fresh						
Cooked	✓	✓		✓		
Uncooked						✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round,						
whole, square	Square	Mound		Square	Square	
Stripped, diced,						
shredded, grated,						
in pieces		In Pieces				
Texture						
Coarse				✓		
Crisp						
Firm	✓		✓		✓	
Fluid						✓
Smooth		✓				
Soft						
Method of preparation						
Baked, broiled, fried	Baked			Baked		
Creamed						
Raw						
Steamed, stewed,						
boiled		Steamed	Boiled		Boiled	
Used as purchased						✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 22, 1949</u>					
		Meat	Mashed	Green	Cornbread	Fruit	Milk
		Loaf,	Potatoes	Peas		Gelatin	
		Gravy					
Person responsible for preparation							
Head Cook		✓	✓	✓			
Assistant Cook					✓	✓	
Dishwasher			✓				
Time served		11:20	11:20	11:20	11:20	11:20	11:20
Adequacy							
Quantity	:Total						
required by	:quan-						
the National	:tity						
School Lunch	:served						
Act ¹	:per						
	:person						
Meat, fish,	++ Beef					Egg	
cheese or	1½ oz. 1½ oz.					Powder	
poultry	:	Egg				+	
(2 oz.);	:	Powder					
egg (1);	:	+					
legumes	:						
(½ c.);	:						
peanut	:						
butter	:						
(½ c.)	:						
Fruit and/	+++ Onions	Potatoes	Peas		Peaches		
or vege-	++ +	+	½ c.	¼ c.	+		
table	¾ c.	Tomatoes					
(¾ c.)	:	+					
Bread, en-	:						
riched	1+	Crumbs			1		
(1 serving):	:	+					
Milk	+++ Milk	Milk			Milk		½ pt.
(½ pt.)	½ pt.	+	+		+		
Butter or	:						
fortified	:						
substitute:	1½ tsp.	¾ tsp.	¾ tsp.				
(2 tsp.)	:						

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 23, 1949</u>					
	<u>Ham-</u>	<u>Glazed</u>	<u>Green</u>	<u>Buttered</u>	<u>Dried</u>	<u>Milk</u>
	<u>Egg</u>	<u>Sweet</u>	<u>Beans</u>	<u>Whole Wheat</u>	<u>Peach</u>	
	<u>Casserole</u>	<u>Potatoes</u>		<u>Bread</u>	<u>Cobbler</u>	
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓	✓	
White-cream						✓
Yellow-red		✓				
Flavor						
Bland			✓	✓		✓
Salty	✓					
Strong						
Sweet		✓			✓	
Tart						
Form, A. P.						
Baked				✓		
Canned			✓			
Dried					✓	
Fresh						
Cooked	✓	✓			✓	
Uncooked						✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square	<u>Mound</u>	<u>Whole</u>		<u>Square</u>	<u>Square</u>	
Stripped, diced, shredded, grated, in pieces			<u>In Pieces</u>			
Texture						
Coarse		✓				
Crisp					✓	
Firm					✓	
Fluid						✓
Smooth		✓		✓		
Soft	✓					
Method of preparation						
Baked, broiled, fried	<u>Baked</u>	<u>Baked</u>			<u>Baked</u>	
Creamed	✓					
Raw						
Steamed, stewed, boiled	<u>Boiled</u>	<u>Steamed</u>	<u>Boiled</u>		<u>Stewed</u>	
Used as purchased				✓		✓
Warmed						

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 24, 1949</u>					
	<u>Beef</u>	<u>Buttered</u>	<u>Cole</u>	<u>Buttered</u>	<u>Orange</u>	<u>Milk</u>
	<u>Stew</u>	<u>Potatoes</u>	<u>Slaw</u>	<u>Roll</u>		
Harmony, contrast, variety, balance						
Color						
Green			✓			
Purple						
Tan-brown	✓			✓		
White-cream		✓				✓
Yellow-red					✓	
Flavor						
Bland		✓		✓		✓
Salty	✓					
Strong			✓			
Sweet						
Tart					✓	
Form, A. P.						
Baked				✓		
Canned						
Dried						
Fresh						
Cooked	✓	✓				
Uncooked			✓		✓	✓
Frozen						
Shape						
Fluid						✓
Mixed						
Mound, round, whole, square			<u>Whole</u>		<u>Round</u>	<u>Whole</u>
Stripped, diced, shredded, grated, in pieces						
<u>In Pieces</u>						
<u>Shredded</u>						
Texture						
Coarse			✓		✓	
Crisp						
Firm	✓					
Fluid					✓	✓
Smooth		✓		✓		
Soft						
Method of preparation						
Baked, broiled, fried						
Creamed						
Raw			✓			
Steamed, stewed, boiled						
<u>Stewed</u>						
<u>Steamed</u>						
Used as purchased					✓	✓
Warmed				✓		

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS, Continued

Factors to Consider		Dishes to Be Served <u>March 24, 1949</u>					
		Beef	Buttered	Cole	Buttered	Orange	Milk
		Stew	Potatoes	Saw	Roll		
Person responsible for preparation							
Head Cook		✓	✓				
Assistant Cook				✓	✓	✓	
Dishwasher			✓				
Time served		11:20	11:20	11:20	11:20	11:20	11:20
Adequacy							
Quantity	Total						
required by	quan-						
the National	tity						
School Lunch	served						
Act ¹	per						
	person:						
Meat, fish,	Beef						
cheese or	1 1/2 oz.	1 1/2 oz.					
poultry							
(2 oz.);							
egg (1);							
legumes							
(1/2 c.);							
peanut							
butter							
(1/2 c.)							
Fruit and/	Onions	Potatoes	Cabbage		Orange		
or vege-	1 1/2 c.	+	1/3 c.	1/3 c.	1/2 c.		
table		Carrots					
(3/4 c.)		+					
Bread, en-							
riched	1			1			
(1 serving):							
Milk							
(1/2 pt.)	1/2 pt.					1/2 pt.	
Butter or							
fortified							
substitute:	2 tsp.	3/4 tsp.		1 1/2 tsp.			
(2 tsp.)							

1. Stewart, Jean J. and Edwards, Alice L. Foods Production, Marketing, Consumption. New York: Prentice-Hall, Inc., 1948. pp. 52-53.

CHECK LIST FOR EVALUATION OF SCHOOL LUNCH MENUS

Factors to Consider	Dishes to Be Served <u>March 25, 1949</u>					
	<u>Hot Roast</u>	<u>Baked</u>	<u>Buttered</u>	<u>Buttered</u>	<u>Steamed</u>	<u>Milk</u>
	<u>Pork</u>	<u>Sweet</u>	<u>Kale</u>	<u>Whole Wheat</u>	<u>Prunes</u>	
	<u>Sandwich</u>	<u>Potatoes</u>		<u>Bread</u>		
Harmony, contrast,						
variety, balance						
Color						
Green			✓			
Purple					✓	
Tan-brown	✓			✓		
White-cream						✓
Yellow-red		✓				
Flavor						
Bland				✓		✓
Salty	✓					
Strong			✓			
Sweet		✓			✓	
Tart						
Form, A. P.						
Baked				✓		
Canned						
Dried					✓	
Fresh						
Cooked	✓	✓				
Uncooked						✓
Frozen			✓			
Shape						
Fluid						✓
Mixed						
Mound, round,						
whole, square	<u>Square</u>	<u>Whole</u>	<u>Mound</u>	<u>Square</u>		
Stripped, diced,						
shredded, grated,						
in pieces					<u>In Pieces</u>	
Texture						
Coarse			✓			
Crisp						
Firm	✓				✓	
Fluid						✓
Smooth		✓		✓		
Soft						
Method of preparation						
Baked, broiled, fried	<u>Baked</u>	<u>Baked</u>				
Creamed						
Raw						
Steamed, stewed,						
boiled		<u>Steamed</u>	<u>Steamed</u>		<u>Steamed</u>	
Used as purchased				✓		✓
Warmed						

APPENDIX B

COMMENT ON HARMONY, CONTRAST, AND BALANCE IN MENUS BY THE
COMMITTEE OF SIX JUDGES

Menus	Color	Flavor	Form	Shape	Texture
February 28		Too sweet; 1		Good, if	
Baked luncheon loaf		too heavy,		potato is	
Glazed sweet potatoes		add lighter		whole rather	
Cabbage-pepper salad		dessert,		than cut. 4	
Buttered roll		such as			
Raisin Cobbler		applesauce.			
Milk		1			
March 1			All right		
Corned beef hash			if salad		
Buttered corn			is raw.		
Mixed vegetable salad			3		
Buttered whole wheat bread					
Applesauce					
Milk					
March 2	Lacks contrast. Add	Lack of		All round	
Fish patties	lettuce. Substitute	contrast.		shapes. 3	
Buttered potatoes	dried prunes. 1	Too bland.			
Carrots-raisin salad	Color monotonous.	5			
Cornbread	Too white and				
Dried peaches	yellow. 2				
Milk	Lacks contrast. 3				
	Too much yellow. 5				
	Lack of contrast. 6				

COMMENTS ON HARMONY, CONTRAST, AND BALANCE IN MENUS, Continued

Menus	Color	Flavor	Form	Shape	Texture
March 3	Fair in	Lacks		Lacks	Lacks contrast. Add carrot
Meat loaf, gravy	harmony,	contrast,		contrast.	strips. 1
Mashed potatoes	contrast,	Too		4	Lacks contrast: peas and
Green peas	and	bland.			potatoes soft; 2
Buttered roll	balance.	5			Lacks balance: no succu-
Gingerbread	4				lent vegetable. 2
Milk					Lacks contrast. Add some-
					thing crisp, such as a
					hard roll. 3
March 4					Lacks contrast and balance.
Franks au gratin					Dry. 5
Baked potato					Lacks contrast. 6
Cabbage-apple salad					
Buttered whole wheat bread					
Chocolate pudding					
Milk					
March 7		Lacks	Fair	Lacks	Lacks contrast. Add crisp
Ham salad		contrast.	in	con-	salad or dessert. 1
Buttered potatoes		Peas and	form.	trast.	Lacks balance. No succulent
Green peas		potatoes	4	Too	vegetable. 2
Buttered whole wheat bread		bland. 2		round.	
Apple cobbler				4	
Milk					

COMMENTS ON HARMONY, CONTRAST, AND BALANCE IN MENUS, Continued

Menus	Color	Flavor	Form	Shape	Texture
March 8 Hamburger patties, gravy Mashed potatoes Cole slaw Buttered roll Prune plums Milk	Fair in harmony, contrast, and balance. 4				
March 9 Braised liver Buttered corn Shredded lettuce Buttered whole wheat bread Spiced peaches Milk	Lacks contrast. 3			Lacks contrast. Too little balance. 5	
March 10 Baked beans Buttered kale Carrots-raisin salad Buttered roll Spice cake Milk	Lacks harmony and contrast. Use apple salad instead of carrot salad. 1	Lacks harmony. Beans and kale (strong) not too "chummy". 2		Lacks harmony. 6	

COMMENTS ON HARMONY, CONTRAST, AND BALANCE IN MENUS, Continued

Menus	Color	Flavor	Form	Shape	Texture
March 11	Lacks contrast.		Lacks	Lacks	Lacks contrast. Use
Salmon loaf	Salmon and		contrast	harmony.	cole slaw rather
Creamed potatoes	carrots quite		and	6	than carrots. 1
Buttered carrots	alike. 2		balance.		Lacks contrast. 3
Cornbread	Lacks contrast.		All		
Lemon custard	3		cooked.		
Milk			5		
March 14					
Egg salad					
Baked potato					
Fruit-vegetable salad					
Buttered whole wheat bread					
Plain cake with orange					
sauce					
Milk					
March 15					Lacks contrast. 3
Baked fish					
Escalloped potatoes					
Buttered beets					
Cornbread					
Lemon pie					
Milk					

COMMENTS ON HARMONY, CONTRAST, AND BALANCE IN MENUS, Continued

Menus	Color	Flavor	Form	Shape	Texture
March 16					Lacks contrast.
Swedish meat balls, gravy					Substitute carrot-
Mashed potatoes					green pepper salad
Green peas					for peas. 1
Buttered roll					Lacks contrast. Peas
Glazed apples					and potatoes soft. No
Milk					succulent vegetable.
					2
					Lacks contrast. Raw
					leafy vegetable would
					help. 4
March 17					
Hot roast beef sandwich					
Glazed sweet potatoes					
Cabbage-pepper salad					
Buttered whole wheat bread					
Fruit compote					
Milk					
March 18					
Liver loaf, gravy		Lack of harmony.			
Buttered potatoes		Substitute roll			
Carrots-raisin salad		for cornbread. 1			
Cornbread		Lack of harmony.			
Fruit bars		Liver and raisins			
Milk		not too "chummy".			
		2			

COMMENTS ON HARMONY, CONTRAST, AND BALANCE IN MENUS, Continued

Menus	Color	Flavor	Form	Shape	Texture
March 21	Lacks contrast.				Lacks contrast. Use
Creamed salmon	3				baked potato rather
Buttered corn					than corn, and corn-
Mixed vegetable salad					bread instead of a
Buttered roll					roll. 1
Apple					
Milk					
March 22		Lacks			Lacks contrast. Soft
Meat loaf, gravy		contrast.			peas and potatoes. 2
Mashed potatoes		Use			Fair in texture. 4
Green peas		tomato			
Cornbread		sauce in-			
Fruit gelatin		stead of			
Milk		gravy. 1			
March 23					Fair in harmony,
Ham-egg casserole					contrast, and
Glazed sweet potatoes					balance. 4
Green beans					Lack of contrast. 6
Buttered whole wheat bread					
Dried peach cobbler					
Milk					

COMMENTS ON HARMONY, CONTRAST, AND BALANCE IN MENUS, Continued

Menus	Color	Flavor	Form	Shape	Texture
March 24					
Beef stew					
Buttered potatoes					
Cole slaw					
Buttered roll					
Orange					
Milk					
March 25		Lack of harmony.			Lacks contrast. 3
Hot roast pork sandwich		Use orange in-			
Baked sweet potatoes		stead of the			
Buttered kale		prunes. 1			
Buttered whole wheat bread		Lack of harmony.			
Steamed prunes		Prunes and kale			
Milk		not "chummy". 2			

Appendix C

Page 10 of 10

The first part of the document is a list of the names of the members of the committee who were present at the meeting on the 10th of the month.

The second part of the document is a list of the names of the members of the committee who were absent from the meeting on the 10th of the month.

The third part of the document is a list of the names of the members of the committee who were present at the meeting on the 11th of the month.

The fourth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 11th of the month.

The fifth part of the document is a list of the names of the members of the committee who were present at the meeting on the 12th of the month.

The sixth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 12th of the month.

The seventh part of the document is a list of the names of the members of the committee who were present at the meeting on the 13th of the month.

The eighth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 13th of the month.

The ninth part of the document is a list of the names of the members of the committee who were present at the meeting on the 14th of the month.

The tenth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 14th of the month.

The eleventh part of the document is a list of the names of the members of the committee who were present at the meeting on the 15th of the month.

The twelfth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 15th of the month.

The thirteenth part of the document is a list of the names of the members of the committee who were present at the meeting on the 16th of the month.

The fourteenth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 16th of the month.

The fifteenth part of the document is a list of the names of the members of the committee who were present at the meeting on the 17th of the month.

The sixteenth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 17th of the month.

The seventeenth part of the document is a list of the names of the members of the committee who were present at the meeting on the 18th of the month.

The eighteenth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 18th of the month.

The nineteenth part of the document is a list of the names of the members of the committee who were present at the meeting on the 19th of the month.

The twentieth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 19th of the month.

The twenty-first part of the document is a list of the names of the members of the committee who were present at the meeting on the 20th of the month.

The twenty-second part of the document is a list of the names of the members of the committee who were absent from the meeting on the 20th of the month.

The twenty-third part of the document is a list of the names of the members of the committee who were present at the meeting on the 21st of the month.

The twenty-fourth part of the document is a list of the names of the members of the committee who were absent from the meeting on the 21st of the month.

The twenty-fifth part of the document is a list of the names of the members of the committee who were present at the meeting on the 22nd of the month.

APPENDIX C

JOB SPECIFICATION

NAME OF JOB: First Cook

SUPERVISION: The first cook is directly responsible to the manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The first cook manipulates the range, the steam-jacketed kettle, oven, peeler, and mixing machine. She has at hand the cook's table, refrigerator, and the usual small equipment. The cook procures perishables from the manager daily and staples and cleaning supplies as needed. All food is issued by the manager.

WORK SCHEDULE:

OBSERVED: March 21, 1949

8:00 - Reports to work	:	Ten minutes late.
	:	
8:30 - Checks menu	:	Yes.
	:	
Checks left-overs	:	Yes.
	:	
Secures necessary supplies	:	Yes.
	:	
Prepares soup for lunch	:	Yes.
	:	
8:30-11:00 - Prepares main luncheon	:	Yes.
dish	:	
Cooks vegetables for lunch	:	Yes.
	:	
Aids cook in other unit,	:	Aided assistant cook
if necessary	:	with sandwiches.
Makes dessert, if necessary:	:	
	:	
11:00 - Completes all food prepara-	:	Yes.
tion	:	
11:00-11:15 - Takes prepared food to	:	Yes.
counter	:	
11:15-12:30 - Replenishes counter as	:	Yes.
necessary	:	
12:30-1:00 - Eats lunch	:	Yes.
	:	
1:00-2:30 - Puts away left-overs	:	Yes.
	:	
Helps wash pots and pans	:	Yes.
	:	
Checks left-overs in other	:	Yes.
cook's refrigerator	:	
Cleans unit	:	Yes.
	:	
2:30 - Goes off duty	:	Yes. Fifteen minutes
	:	early.

JOB SPECIFICATION

NAME OF JOB: First Cook

SUPERVISION: The first cook is directly responsible to the manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The first cook manipulates the range, the steam-jacketed kettle, oven, peeler, and mixing machine. She has at hand the cook's table, refrigerator, and the usual small equipment. The cook procures perishables from the manager daily and staples and cleaning supplies as needed. All food is issued by the manager.

WORK SCHEDULE:

OBSERVED: March 22, 1949

8:00 - Reports to work	: <u>Five minutes late.</u>
8:30 - Checks menu	: <u>Yes.</u>
Checks left-overs	: <u>Yes.</u>
Secures necessary supplies	: <u>Yes.</u>
Prepares soup for lunch	: <u>Assisted by assistant</u>
	: <u>cook.</u>
8:30-11:00 - Prepares main luncheon	: <u>Yes.</u>
dish	:
Cooks vegetables for lunch	: <u>Yes.</u>
	:
Aids cook in other unit,	:
if necessary	:
Makes dessert, if necessary:	:
	:
11:00 - Completes all food prepara-	: <u>Yes.</u>
tion	:
11:00-11:15 - Takes prepared food to	:
counter	: <u>Yes.</u>
11:15-12:30 - Replenishes counter as	:
necessary	: <u>Yes.</u>
12:30-1:00 - Eats lunch	: <u>Yes.</u>
	:
1:00-2:30 - Puts away left-overs	: <u>Yes. Steamed potatoes and</u>
	: <u>baked ham for next day.</u>
Helps wash pots and pans	:
	:
Checks left-overs in other	: <u>Yes.</u>
cook's refrigerator	:
Cleans unit	: <u>Yes.</u>
	:
2:30 - Goes off duty	: <u>Yes.</u>
	:

JOB SPECIFICATION

NAME OF JOB: First Cook

SUPERVISION: The first cook is directly responsible to the manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The first cook manipulates the range, the steam-jacketed kettle, oven, peeler, and mixing machine. She has at hand the cook's table, refrigerator, and the usual small equipment. The cook procures perishables from the manager daily and staples and cleaning supplies as needed. All food is issued by the manager.

WORK SCHEDULE:

OBSERVED: March 23, 1949

8:00 - Reports to work	: Yes.
8:30 - Checks menu	: Yes.
Checks left-overs	: Yes.
Secures necessary supplies	: Yes.
Prepares soup for lunch	: Yes.
8:30-11:00 - Prepares main luncheon dish	: Yes.
Cooks vegetables for lunch	: Yes.
Aids cook in other unit, if necessary	:
Makes dessert, if necessary	:
11:00 - Completes all food preparation	: Difficult menu.
	: Delayed 23 minutes.
11:00-11:15 - Takes prepared food to counter	: Three minutes late with casserole. (Children eat 11:20.)
11:15-12:30 - Replenishes counter as necessary	: Yes.
12:30-1:00 - Eats lunch	: Yes.
1:00-2:30 - Puts away left-overs	: Yes.
Helps wash pots and pans	: Yes.
Checks left-overs in other cook's refrigerator	: Yes.
Cleans unit	: Yes.
2:30 - Goes off duty	: Yes.

JOB SPECIFICATION

NAME OF JOB: First Cook

SUPERVISION: The first cook is directly responsible to the manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The first cook manipulates the range, the steam-jacketed kettle, oven, peeler, and mixing machine. She has at hand the cook's table, refrigerator, and the usual small equipment. The cook procures perishables from the manager daily and staples and cleaning supplies as needed. All food is issued by the manager.

WORK SCHEDULE:

OBSERVED: March 24, 1949

8:00 - Reports to work	: Yes.
8:30 - Checks menu	: Yes.
Checks left-overs	: Yes.
Secures necessary supplies	: Yes.
Prepares soup for lunch	: Yes.
8:30-11:00 - Prepares main luncheon dish	: Yes.
Cooks vegetables for lunch	: Yes.
Aids cook in other unit, if necessary	: Yes.
Makes dessert, if necessary	:
11:00 - Completes all food preparation	: Yes.
11:00-11:15 - Takes prepared food to counter	: Yes.
11:15-12:30 - Replenishes counter as necessary	: Yes.
12:30-1:00 - Eats lunch	: Yes.
1:00-2:30 - Puts away left-overs	: Yes. Baked pork for next day.
Helps wash pots and pans	: Yes.
Checks left-overs in other cook's refrigerator	: Yes.
Cleans unit	: Yes.
2:30 - Goes off duty	: Yes.

JOB SPECIFICATION

NAME OF JOB: First Cook

SUPERVISION: The first cook is directly responsible to the manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The first cook manipulates the range, the steam-jacketed kettle, oven, peeler, and mixing machine. She has at hand the cook's table, refrigerator, and the usual small equipment. The cook procures perishables from the manager daily and staples and cleaning supplies as needed. All food is issued by the manager.

WORK SCHEDULE:

OBSERVED: March 25, 1949

8:00 - Reports to work	: Yes.
	:
8:30 - Checks menu	: Yes.
	:
Checks left-overs	: Yes.
	:
Secures necessary supplies	: Yes.
	:
Prepares soup for lunch	: Yes.
	:
8:30-11:00- Prepares main luncheon	: Yes.
dish	:
Cooks vegetables for lunch	: Yes.
	:
Aids cook in other unit,	:
if necessary	:
Makes dessert, if necessary:	:
	:
11:00 - Completes all food prepara-	: Yes.
tion	:
11:00-11:15 - Takes prepared food to	: Yes.
counter	:
11:15-12:30 - Replenishes counter as	: Yes.
necessary	:
12:30-1:00 - Eats lunch	: Yes.
	:
1:00-2:30 - Puts away left-overs	: Yes.
	:
Helps wash pots and pans	: Yes.
	:
Checks left-overs in other	: Yes.
cook's refrigerator	:
Cleans unit	: Yes.
	:
2:30 - Goes off duty	: Yes.
	:

JOB SPECIFICATION

NAME OF JOB: Assistant Cook

SUPERVISION: The assistant cook is directly responsible to the first cook and manager. An atmosphere conducive to mutual respect and co-operation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The assistant cook manipulates the slicer, shredder, and all small equipment necessary for the job. She has at hand the vegetable sink, salad table, supply cabinet, and salad refrigerator.

WORK SCHEDULE:

OBSERVED: March 7, 1949

8:00 - Reports to work	: Five minutes late.
8:05-8:30 - Checks menu, procures supplies for her unit and checks left-overs	: Yes.
8:30-10:50 - Prepares vegetables for salad	: No vegetable salad.
Prepares dessert when necessary	: Yes.
Makes toast for soup	: Yes.
Prepares bread, rolls, etc.	: Whole wheat bread.
Makes sandwiches	: Cooked filling.
Prepares salad	: None.
Makes coffee	: Yes.
Assists head cook if necessary	: Assisted with ham salad.
10:50-11:00 - Serves dessert	: Yes.
11:00 - Completes all food preparation	: Yes.
11:00-11:30 - Sends prepared food to counter	: Yes.
11:30-12:00 - Eats lunch	: Yes.
12:00-12:40 - Replenishes food to counter while head cook eats, etc.	: Yes.
12:40-1:05 - Serves kindergarten (Refills)	: Had to be reminded.
1:05-2:30 - Puts away left-overs	: Yes.
Finishes washing pots and pans	: Yes.

Cleans counter and other : Yes.
equipment in serving unit : _____
in dining room : _____

Cleans unit : Yes.

2:30 - Goes off duty : Yes.

JOB SPECIFICATION

NAME OF JOB: Assistant Cook

SUPERVISION: The assistant cook is directly responsible to the first cook and manager. An atmosphere conducive to mutual respect and co-operation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The assistant cook manipulates the slicer, shredder, and all small equipment necessary for the job. She has at hand the vegetable sink, salad table, supply cabinet, and salad refrigerator.

WORK SCHEDULE:

OBSERVED: March 8, 1949

8:00 - Reports to work	: Ten minutes late.
8:05-8:30 - Checks menu, procures supplies for her unit and checks left-overs	: Yes.
8:30-10:50 - Prepares vegetables for salad	: Yes.
Prepares dessert when necessary	: Put it in refrigerator to chill.
Makes toast for soup	: Yes.
Prepares bread, rolls, etc.	: Rolls.
Makes sandwiches	: Yes.
Prepares salad	: Yes. Shredder gave trouble; slowed down process.
Makes coffee	: Yes.
Assists head cook if necessary	: Yes.
10:50-11:00 - Serves dessert	: Yes.
11:00 - Completes all food preparation	: Yes.
11:00-11:30 - Sends prepared food to counter	: Yes.
11:30-12:00 - Eats lunch	: Five minutes late.
12:00-12:40 - Replenishes food to counter while head cook eats, etc.	: Yes.
12:40-1:05 - Serves kindergarten (Refills)	: Yes.
1:05-2:30 - Puts away left-overs	: Yes.
Finishes washing pots and pans	: Yes.

Cleans counter and other : Yes. _____
equipment in serving unit : _____
in dining room : _____
Cleans unit : Yes. _____
: _____
2:30 - Goes off duty : Completed work by 2:15. _____
: _____

JOB SPECIFICATION

NAME OF JOB: Assistant Cook

SUPERVISION: The assistant cook is directly responsible to the first cook and manager. An atmosphere conducive to mutual respect and co-operation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The assistant cook manipulates the slicer, shredder, and all small equipment necessary for the job. She has at hand the vegetable sink, salad table, supply cabinet, and salad refrigerator.

WORK SCHEDULE:

OBSERVED: March 9, 1949

8:00 - Reports to work	: Ten minutes late.
8:05-8:30 - Checks menu, procures supplies for her unit and checks left-overs	: Yes.
8:30-10:50 - Prepares vegetables for salad	: Yes.
Prepares dessert when necessary	: Assisted in standardizing a recipe.
Makes toast for soup	: Yes.
Prepares bread, rolls, etc.	: Whole wheat bread.
Makes sandwiches	: Yes.
Prepares salad	: Yes.
Makes coffee	: Yes.
Assists head cook if necessary	: Yes.
10:50-11:00 - Serves dessert	: Yes.
11:00 - Completes all food preparation	: Yes.
11:00-11:30 - Sends prepared food to counter	: Yes.
11:30-12:00 - Eats lunch	: Ten minutes late.
12:00-12:40 - Replenishes food to counter while head cook eats, etc.	: Yes.
12:40-1:05 - Serves kindergarten (Refills)	: Yes.
1:05-2:30 - Puts away left-overs	: Yes.
Finishes washing pots and pans	: Yes.

Cleans counter and other : Yes.
equipment in serving unit : _____
in dining room : _____
Cleans unit : Left floor only partially
: swept.
2:30 - Goes off duty : 2:15.

JOB SPECIFICATION

NAME OF JOB: Assistant Cook

SUPERVISION: The assistant cook is directly responsible to the first cook and manager. An atmosphere conducive to mutual respect and co-operation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The assistant cook manipulates the slicer, shredder, and all small equipment necessary for the job. She has at hand the vegetable sink, salad table, supply cabinet, and salad refrigerator.

WORK SCHEDULE:

OBSERVED: March 10, 1949

8:00 - Reports to work	: Yes.
8:05-8:30 - Checks menu, procures supplies for her unit and checks left-overs	: Yes.
8:30-10:50 - Prepares vegetables for salad	: Yes.
Prepares dessert when necessary	: Contrary to her previous training, she weighed and measured accurately.
Makes toast for soup	: Yes.
Prepares bread, rolls, etc.	: Rolls.
Makes sandwiches	: Yes.
Prepares salad	: Yes.
Makes coffee	: Yes.
Assists head cook if necessary	: Did not have time. Head cook assisted her.
10:50-11:00 - Serves dessert	: Head cook assisted by serving dessert since she had an easier day.
11:00 - Completes all food preparation	:
11:00-11:30 - Sends prepared food to counter	: Yes.
11:30-12:00 - Eats lunch	: Yes.
12:00-12:40 - Replenishes food to counter while head cook eats, etc.	: Yes.
12:40-1:05 - Serves kindergarten (Refills)	: Yes.
1:05-2:30 - Puts away left-overs	: Yes.
Finishes washing pots and pans	: Yes.

Cleans counter and other : Yes.
equipment in serving unit :
in dining room :
Cleans unit : Yes.
:
2:30 - Goes off duty : Yes.
:

JOB SPECIFICATION

NAME OF JOB: Assistant Cook

SUPERVISION: The assistant cook is directly responsible to the first cook and manager. An atmosphere conducive to mutual respect and co-operation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: The assistant cook manipulates the slicer, shredder, and all small equipment necessary for the job. She has at hand the vegetable sink, salad table, supply cabinet, and salad refrigerator.

WORK SCHEDULE:

OBSERVED: March 11, 1949

8:00 - Reports to work	: Ten minutes late.
8:05-8:30 - Checks menu, procures supplies for her unit and checks left-overs	: Yes.
8:30-10:50 - Prepares vegetables for salad	: Not necessary.
Prepares dessert when necessary	: Yes. Dietitian assisted.
Makes toast for soup	: Yes.
Prepares bread, rolls, etc.	: Cornbread. Slower because unaccustomed to accurately weighing and measuring.
Makes sandwiches	: Yes.
Prepares salad	: Not necessary.
Makes coffee	: Yes.
Assists head cook if necessary	: Yes.
10:50-11:00 - Serves dessert	: Yes.
11:00 - Completes all food preparation	: Yes.
11:00-11:30 - Sends prepared food to counter	: Yes.
11:30-12:00 - Eats lunch	: Five minutes late.
12:00-12:40 - Replenishes food to counter while head cook eats, etc.	: Yes.
12:40-1:05 - Serves kindergarten (Refills)	: Yes.
1:05-2:30 - Puts away left-overs	: Yes.
Finishes washing pots and pans	: Yes.

Cleans counter and other : Failed to drain water from
 equipment in serving unit : steam table as is done
 in dining room : once per week.
 Cleans unit : Yes.
 : _____
 2:30 - Goes off duty : Yes.
 : _____

JOB SPECIFICATION

NAME OF JOB: Dishwasher and General Helper

SUPERVISION: The dishwasher and general helper is directly responsible to the head cook and manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: This employee manipulates the dishwasher and has at hand the bread tables. He is responsible for the cleaning of the dining area, which includes tables, counters, and water fountain, and small equipment necessary to his tasks.

WORK SCHEDULE:

OBSERVED: February 28, 1949

8:00 - Reports to work	: Yes.
8:05-8:30 - Cleans dining room	: Yes. Goes to laundry early
	: each Monday morning.
	: Pushes up schedule 20-30
	: minutes.
Ventilates dining room	: Yes. Extra moving of
	: chairs in dining room on
Cleans counter and service	: Mondays.
tables	: Yes.
8:30-9:30 - Arranges for serving: sil-	: 9:25.
ver, straws, napkins,	:
sugar, trays	:
Fills salt shakers when	: Yes.
necessary	:
Kills flies when necessary	: Not necessary.
	:
Cleans storeroom when	: Yes.
necessary	:
9:30-10:30 - Peels vegetables listed on	: Not necessary. Did extra
menu	: cleaning in kitchen.
Arranges dishes, cups and	: 9:35.
saucers on counter	:
10:30-10:45 - Checks water in steam	: Yes.
table	:
Lights gas under steam	: Yes.
table	:
10:45-10:50 - Puts cream on counter	: Yes.
	:
Washes pots and pans	: Yes.
	:
10:50-11:20 - Eats	: Yes.
	:
11:20-1:30 - Receives dishes, stacks	: Began 11:35. Washed pots
them individually	: and pans until soiled
(Cleans up after accidents)	: dishes returned.
	:

	Washes dishes, needed for	: Yes. Late in washing tea-
	immediate use, usually	: <u>spoons for first grade.</u>
	trays, small plates, and	: _____
	teaspoons_____	: _____
	Cleans all tables and	: _____
	chairs in dining area_____	: <u>1:45.</u>
1:30-2:00	- Washes all dishes, puts	: Yes.
	them away_____	: _____
	Cleans equipment_____	: Yes.
		: _____
2:30	- Goes off duty_____	: Yes.
		: _____

JOB SPECIFICATION

NAME OF JOB: Dishwasher and General Helper

SUPERVISION: The dishwasher and general helper is directly responsible to the head cook and manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: This employee manipulates the dishwasher and has at hand the bread tables. He is responsible for the cleaning of the dining area, which includes tables, counters, and water fountain, and small equipment necessary to his tasks.

WORK SCHEDULE:

OBSERVED: March 1, 1949

8:00 - Reports to work	: Yes.
	:
8:05-8:30 - Cleans dining room	: Yes.
	:
Ventilates dining room	: Yes.
	:
Cleans counter and service tables	: Yes.
	:
8:30-9:30 - Arranges for serving: silver, straws, napkins, sugar, trays	: Yes.
	:
Fills salt shakers when necessary	: Yes.
	:
Kills flies when necessary	:
	:
Cleans storeroom when necessary	: Not necessary.
	:
9:30-10:30 - Peels vegetables listed on menu	: Not necessary.
	:
Arranges dishes, cups and saucers on counter	: Completed at 9:45.
	: Cleaned in kitchen.
10:30-10:45 - Checks water in steam table	: Yes.
	:
Lights gas under steam table	: Yes.
	:
10:45-10:50 - Puts cream on counter	: Yes.
	:
Washes pots and pans	: Yes.
	:
10:50-11:20 - Eats	: Completed cleaning while equipment was out before eating.
	:
11:20-1:30 - Receives dishes, stacks them individually	: Yes.
	:
(Cleans up after accidents)	: Yes.
	:

Washes dishes, needed for : Yes.
immediate use, usually : _____
trays, small plates, and : _____
teaspoons : _____
Cleans all tables and : Yes.
chairs in dining area : _____
1:30-2:00 - Washes all dishes, puts : Yes.
them away : _____
Cleans equipment : Yes. One cabinet needed
: extra cleaning.
2:30 - Goes off duty : Yes.
: _____

JOB SPECIFICATION

NAME OF JOB: Dishwasher and General Helper

SUPERVISION: The dishwasher and general helper is directly responsible to the head cook and manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: This employee manipulates the dishwasher and has at hand the bread tables. He is responsible for the cleaning of the dining area, which includes tables, counters, and water fountain, and small equipment necessary to his tasks.

WORK SCHEDULE:

OBSERVED: March 2, 1949

8:00 - Reports to work	: Yes.
8:05-8:30 - Cleans dining room	: Yes.
Ventilates dining room	: Yes.
Cleans counter and service tables	: Yes.
8:30-9:30 - Arranges for serving: silver, straws, napkins, sugar, trays	: Yes. 9:20.
Fills salt shakers when necessary	: Yes.
Kills flies when necessary	: Not necessary.
Cleans storeroom when necessary	: Yes. 9:25.
9:30-10:30 - Peels vegetables listed on menu	: Yes. Peeled, eyed potatoes. 9:30-10:10.
Arranges dishes, cups and saucers on counter	: Yes.
10:30-10:45 - Checks water in steam table	: Yes.
Lights gas under steam table	: Yes.
10:45-10:50 - Puts cream on counter	: Yes.
Washes pots and pans	: Yes. 10:50.
10:50-11:20 - Eats	: Yes. fifteen minutes late.
11:20-1:30 - Receives dishes, stacks them individually	: Yes.
(Cleans up after accidents)	: Not necessary.

Washes dishes, needed for : Yes.
immediate use, usually :
trays, small plates, and :
teaspoons :
Cleans all tables and : Yes.
chairs in dining area :
1:30-2:00 - Washes all dishes, puts : Yes.
them away :
Cleans equipment : Yes.
:
2:30 - Goes off duty : Yes.
:

JOB SPECIFICATION

NAME OF JOB: Dishwasher and General Helper

SUPERVISION: The dishwasher and general helper is directly responsible to the head cook and manager. At atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: This employee manipulates the dishwasher and has at hand the bread tables. He is responsible for the cleaning of the dining area, which includes tables, counters, and water fountain, and small equipment necessary to his tasks.

WORK SCHEDULE:

OBSERVED: March 3, 1949

8:00 - Reports to work	: Yes.
	:
8:05-8:30 - Cleans dining room	: Yes.
	:
Ventilates dining room	: Yes.
	:
Cleans counter and service tables	: Yes.
	:
8:30-9:30 - Arranges for serving: silver, straws, napkins, sugar, trays	: Yes. 9:25.
	:
Fills salt shakers when necessary	: Yes.
	:
Kills flies when necessary	: Yes.
	:
Cleans storeroom when necessary	: Not necessary.
	:
9:30-10:30 - Peels vegetables listed on menu	: Yes. Peeled, eyed potatoes.
	:
Arranges dishes, cups and saucers on counter	: Yes. 10:00.
	:
10:30-10:45 - Checks water in steam table	: Yes.
	:
Lights gas under steam table	: Yes.
	:
10:45-10:50 - Puts cream on counter	: Too early.
	:
Washes pots and pans	: Yes. 10:35.
	:
10:50-11:20 - Eats	: Ten minutes late. Completed pots and pans first. Not rushed with lunch.
	:
11:20-1:30 - Receives dishes, stacks them individually	: Yes.
(Cleans up after accidents)	:
	:

Washes dishes, needed for : Yes.
immediate use, usually : _____
trays, small plates, and : _____
teaspoons : _____
Cleans all tables and : Yes.
chairs in dining area : _____
1:30-2:00 - Washes all dishes, puts : Yes.
them away : _____
Cleans equipment : Yes.
: _____
2:30 - Goes off duty : Yes, five minutes late.
: _____

JOB SPECIFICATION

NAME OF JOB: Dishwasher and General Helper

SUPERVISION: The dishwasher and general helper is directly responsible to the head cook and manager. An atmosphere conducive to mutual respect and cooperation prevails in this relationship.

EQUIPMENT AND MATERIALS USED ON THE JOB: This employee manipulates the dishwasher and has at hand the bread tables. He is responsible for the cleaning of the dining area, which includes tables, counters, and water fountain, and small equipment necessary to his tasks.

WORK SCHEDULE:

OBSERVED: March 4, 1949

8:00 - Reports to work	: Yes.
	:
8:05-8:30 - Cleans dining room	: Yes.
	:
Ventilates dining room	: Yes.
	:
Cleans counter and service tables	: Yes, ten minutes late.
8:30-9:30 - Arranges for serving: silver, straws, napkins, sugar, trays	: 8:40.
	:
Fills salt shakers when necessary	: Yes.
	:
Kills flies when necessary	: Yes.
	:
Cleans storeroom when necessary	: Yes. Cleaned white dish cabinet.
9:30-10:30 - Peels vegetables listed on menu	: Not necessary.
	:
Arranges dishes, cups and saucers on counter	: Yes.
	:
10:30-10:45 - Checks water in steam table	: Yes.
	:
Lights gas under steam table	: Yes.
	:
10:45-10:50 - Puts cream on counter	: Yes.
	:
Washes pots and pans	: Yes.
	:
10:50-11:20 - Eats	: Five minutes late.
	:
11:20-1:30 - Receives dishes, stacks them individually	: Yes.
	:
(Cleans up after accidents)	: Yes.
	:

Washes dishes, needed for : Yes.
immediate use, usually :
trays, small plates, and :
teaspoons :
Cleans all tables and : Yes.
chairs in dining area :
1:30-2:00 - Washes all dishes, puts : Yes.
them away :
Cleans equipment : Yes.
:
2:30 - Goes off duty : Yes.
:

APPENDIX D

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
February 28, 1949				
Baked Luncheon Loaf	Spiced Luncheon Loaves	2/6#	.41	4.92
Glazed Sweet Potatoes	Sweet Potatoes	1/2 bu.	3.25	1.63
	Sugar, White	1 #	.088	.088
	Sugar, Brown	1 #	.101	.101
	Cornstarch	1/2 c.	.116	.0145
	Oleomargarine	1/2 #	.29	.145
	Salt	1/2 c.	.48	.0048
Cabbage - Pepper Salad	Cabbage	13 #	.035	.455
	Peppers, Green	1 #	.20	.20
	Salt	1/2 c.	.48	.0012
	Dressing, Curry	1 pt.	.314	.157
Buttered Roll	Rolls	11 doz.	.12	1.32
	Oleomargarine	1 1/2 #	.29	.435
Raisin Cobbler	Raisins	8 #	.50	.133
	Sugar, White	1 3/4 #	.088	.1466
	Cornstarch	1 1/2 c.	.116	.0725
	Salt	1/2 c.	.48	.0024
	Oleomargarine	1 c.	.29	.145
	Lemons	4	.03	.12
	Pastry			
	Flour	2 1/2 #	.078	.1755
	Shortening	1 1/2 #	.321	.401
	Salt	1/2 oz.	.48	.00045
Milk	Milk, Whole	127 1/2 pt.	.06	7.62
Kindergarten Juice	Orange Juice	2/#5	.20	.40
Total Cost				\$ 18.68795
Average Cost Per Plate*				\$.14714

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 2, 1949</u>				
<u>Fish Patties</u>	Pollock	5 #	.24	1.20
	Salmon	8/No. 1 Tall	.581	4.648
	Bread Crumbs	2 loaves	.16	.32
	Egg Powder	1 c.	.20	.0071
	Onions	1 #	.05	.05
	Oleomargarine	1 #	.29	.29
	Flour	1/2 #	.078	.039
	Milk, Skim	2 qt.	.16	.32
	Salt	1/2 c.	.48	.0012
<u>Buttered Potatoes</u>	Potatoes	50 #	1.00	.50
	Oleomargarine	1 #	.29	.29
	Salt	1/2 c.	.48	.0024
<u>Carrots-Raisin Salad</u>	Carrots	10 #	.05	.50
	Raisins	2 1/2 #	.50	.0415
<u>Cornbread</u>	Cornmeal	3 1/2 #	.19	.665
	Flour	3 1/2 #	.078	.273
	Salt	1/2 c.	.48	.0012
	Sugar, White	1 1/2 #	.088	.11
	Baking Powder	6 oz.	.82	.0615
	Milk, Skim	3 qt.	.16	.48
	Egg Powder	1 1/2 c.	.20	.01065
	Shortening	6 oz.	1.283	.12
<u>Dried Peaches</u>	Peaches, Dried	10 #	.50	.166
	Sugar, White	2 #	.088	.176
<u>Milk</u>	Milk, Whole	13 1/4 pt.	.06	8.04
<u>Kindergarten Juice</u>	Orange Juice	2/ # 5	.23	.46
Total Cost \$ 18.77255				
Average Cost Per Plate* \$.14009				

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 3, 1949</u>				
Meat Loaf	Ground Beef	15#	.40	6.00
	Egg Powder	1c.	.20	.0071
	Onions	1#	.05	.05
	Skim Milk	1 qt.	.16	.16
	Stale Bread	2 loaves	.16	.32
	Salt	$\frac{3}{4}$ c.	.48	.0066
	Pepper, Black	4 tsp.	.96	.06
	Tomatoes	$1\frac{1}{2}$ #	.25	.25
Gravy	Salt	2 tb.	.48	.0012
	Shortening	1 c.	.321	.1605
	Flour	3 c.	.078	.0585
Mashed Potatoes	Potatoes	50#	1.00	.50
	Oleomargarine	$\frac{1}{2}$ #	.29	.145
	Salt	$\frac{1}{4}$ c.	.48	.0024
	Milk, Skim	2 qt.	.16	.32
Green Peas	Green Peas	$2\frac{1}{2}$ #	.83	3.32
	Fat Back	$\frac{1}{2}$ #	.17	.085
	Salt	$\frac{1}{4}$ c.	.48	.0012
Buttered Roll	Rolls	12 doz.	.12	1.44
	Oleomargarine	1 #	.29	.29
Gingerbread	Oleomargarine	$1\frac{1}{2}$ #	.29	.435
	Sugar, White	$1\frac{1}{2}$ #	.088	.132
	Molasses	$1\frac{1}{2}$ qt.	1.61	.6038
	Cinnamon	2 tb.	.08	.04
	Cloves	2 tb.	.08	.04
	Ginger	2 tb.	.08	.04
	Soda	2 oz.	.10	.0166
	Egg Powder	$1\frac{1}{2}$ c.	.20	.01065
	Flour	$3\frac{1}{2}$ #	.078	.273
Milk	Milk, Whole	137 $\frac{1}{2}$ pt.	.06	8.22
Kindergarten Juice	Grapefruit Juice	$2\frac{1}{2}$ #	.04	.08
Total Cost				\$ 23.06855
Average Cost Per Plate*				\$.16838

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 4, 1949</u>				
Franks au Gratin	Frankfurters	12 #	.40	4.80
	Cheese	1 #	.44	.44
	Flour	6 oz.	.078	.0288
	Oleomargarine	6 oz.	.29	.108
	Salt	$\frac{1}{2}$ lb.	.48	.0045
	Pepper, Black	$\frac{1}{2}$ tsp.	.96	.0111
	Milk, Skim	3 qt.	.16	.48
Baked Potatoes	Potatoes	50 #	1.00	.50
	Salt	$\frac{1}{2}$ c.	.48	.0024
	Oleomargarine	$\frac{1}{2}$ #	.29	.145
Cabbage - Apple Salad	Cabbage	6 #	.04	.24
	Apples	5 #	.10	.50
	Dressing, Curry	1 pt.	.314	.157
Buttered Whole Wheat Bread	Whole Wheat Bread	6 loaves	.16	.96
	Oleomargarine	1 $\frac{1}{2}$ #	.29	.435
Chocolate Pudding	Chocolate Pudding Mix	$\frac{1}{2}$ box	1.10	.55
	Milk, Skim	3 qt.	.16	.48
Milk, Whole	Milk, Whole	12 $\frac{1}{2}$ pt.	.06	7.44
Kindergarten Juice	Orange Juice	'/# 10	.08	.08
Total Cost				\$ 17.35775:
Average Cost Per Plate*				\$.13998:

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

[illegible]

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

[illegible]

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 9, 1949</u>				
Braised Liver	Pork Liver	16 $\frac{1}{2}$ #	.23	3.80
	Onions	4 $\frac{1}{2}$ #	.05	.23
	Tomatoes	3 / # 2 $\frac{1}{2}$.25	.75
	Carrots	6 #	.06	.36
Gravy	Salt	$\frac{1}{4}$ c.	.48	.0048
	Flour	1 $\frac{1}{4}$ #	.078	.0975
	Shortening	3 c.	.321	.4815
Buttered Corn	Corn	4 / # 10	1.041	4.164
	Oleomargarine	$\frac{1}{4}$ #	.29	.145
	Salt	$\frac{1}{4}$ c.	.48	.0012
Shredded Lettuce	Lettuce	8 heads	.115	.92
Buttered Whole Wheat Bread	Whole Wheat Bread	7 loaves	.16	1.12
	Oleomargarine	1 $\frac{1}{4}$ #	.29	.435
Spiced Peaches	Peaches	2 / # 10	.791	1.582
	Sugar, White	1 #	.088	.088
	Nutmeg	1 lb.	.08	.02
Milk	Milk, Whole	132 $\frac{1}{2}$ pt.	.06	7.92
Kindergarten Juice	Grapefruit Juice	2 / # 5	.04	.08
Total Cost				\$ 22.1900
Average Cost Per Plate*				\$.16817

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

[illegible]

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

[illegible]

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 15, 1949</u>				
Baked Fish	Pollock	15#	.24	3.60
	Shortening	2c.	.321	.321
	Salt	$\frac{1}{8}$ c.	.48	.0024
Escalloped Potatoes	Potatoes	50#	1.00	.50
	Flour	1#	.078	.078
	Oleomargarine	1#	.29	.29
	Salt	1 lb.	.48	.0006
	Milk, Skim	4 qt.	.16	.64
Buttered Beets	Beets, Sliced	$\frac{1}{2}$ #10	.60	2.40
	Oleomargarine	1#	.29	.29
	Salt	$\frac{1}{8}$ c.	.48	.0012
Cornbread	Cornmeal	3 $\frac{1}{2}$ #	.19	.665
	Flour	3 $\frac{1}{2}$ #	.078	.273
	Salt	$\frac{1}{8}$ c.	.48	.0012
	Sugar, White	1 $\frac{1}{2}$ #	.088	.11
	Baking Powder	6 oz.	.82	.0615
	Egg Powder	1 $\frac{1}{2}$ c.	.20	.01065
	Shortening	6 oz.	1.283	.12
	Milk, Skim	2 qt.	.16	.32
Lemon Pie	Salt	1 lb.	.48	.0006
	Lemons	6	.04	.24
	Cornstarch	1# 2 oz.	.116	.1305
	Sugar, White	5#	.088	.44
	Egg Yolks	1 doz.	.45	.45
	Egg Powder	$\frac{1}{8}$ c.	.20	.00177
	Oleomargarine	5 oz.	.29	.0906
	Meringue			
	Egg Whites	1 doz.	Included above	.00
	Salt	$\frac{1}{2}$ tsp.	.48	.0001
	Sugar, White	$\frac{3}{4}$ #	.088	.066
	Cornstarch	2 lb.	.116	.00728
	Pastry			
	Flour	2 $\frac{1}{2}$ #	.078	.1755
	Shortening	1 $\frac{1}{2}$ #	.321	.401
	Salt	$\frac{3}{4}$ oz.	.48	.00045
Milk	Milk, Whole	128 $\frac{1}{2}$ pt.	.06	7.68
Kindergarten Juice	Grapefruit Juice	$\frac{2}{5}$ #5	.04	.08
Total Cost				\$ 19.44832
Average Cost Per Plate*				\$.15194

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<i>March 16, 1949</i>				
Swedish Meat Balls	Ground Beef	15#	.45	6.75
	Egg Powder	1 c.	.20	.0071
	Milk, Skim	1 qt.	.16	.16
	Stale Bread	2 loaves	.16	.32
	Salt	$\frac{3}{4}$ c.	.48	.0064
	Pepper, Black	4 tsp.	.96	.06
	Tomatoes	$\frac{1}{2}$ # 2 $\frac{1}{2}$.25	.25
Gravy	Flour	3 c.	.078	.0585
	Shortening	2 c.	.321	.321
	Salt	2 tb.	.48	.0012
Mashed Potatoes	Potatoes	50#	1.00	.50
	Salt	$\frac{1}{2}$ c.	.48	.0024
	Oleomargarine	$\frac{1}{2}$ #	.29	.145
	Milk, Skim	3 qt.	.16	.48
Green Peas	Green Peas	5 # 10	.916	4.58
	Salt	$\frac{1}{4}$ c.	.48	.0012
	Oleomargarine	$\frac{1}{2}$ #	.29	.145
Buttered Roll	Rolls	13 doz.	.12	1.56
	Oleomargarine	$1\frac{1}{2}$ #	.29	.435
Glazed Apples	Apples	8 #	.50	1.328
	Honey	4 c.	.166	.05104
	Lemon	1	.03	.03
Milk	Milk, Whole	140 $\frac{1}{2}$ pt.	.06	8.40
Kindergarten Juice	Tomato Juice	$\frac{2}{5}$ # 5	.27	.54
Total Cost				\$ 24.93664
Average Cost Per Plate*				\$ 1.7811

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 18, 1949</u>				
<u>Liver Loaf</u>	Liver, Pork	15#	.23	3.45
	Onions	1#	.06	.06
	Egg Powder	1½ c.	.20	.01065
	Salt	½ c.	.48	.0048
Gravy	Flour	3c.	.078	.0585
	Shortening	1c.	.321	.1605
Buttered Potatoes	Potatoes	50#	1.00	.50
	Oleomargarine	1#	.29	.29
	Salt	½ c.	.48	.0024
Carrots - Raisin	Carrots	13#	.05	.65
Salad	Raisins	2½#	.50	.0415
Cornbread	Cornmeal	3½#	.19	.665
	Flour	3½#	.078	.273
	Salt	½ c.	.48	.0012
	Sugar, White	1½#	.088	.11
	Baking Powder	6oz.	.82	.0615
	Egg Powder	1½ c.	.20	.01065
	Shortening	6oz.	.321	.12
	Milk, Skim	3qt.	.16	.48
Fruit Bars	Sugar, White	2#	.088	.176
	Oleomargarine	14 oz.	.29	.2534
	Soda	26b.	.10	.0083
	Egg Powder	10 6b.	.20	.0044
	Raisins	2½#	.50	.0415
	Peaches, Dried	1½#	.50	.0249
	Flour	3#	.078	.234
	Salt	2 tsp.	.48	.0004
	Molasses	1c.	1.61	.1006
	Allspice	½ tsp.	.08	.0033
	Nutmeg	½ tsp.	.08	.0033
	Cinnamon	2 tsp.	.08	.0132
	Prunes, Dried	1 c.	.50	.0055
Milk	Milk, Whole	129 ½ pt.	.06	7.74
Kindergarten Juice	Grapefruit Juice	2/#5	.04	.08
Total Cost				\$ 15.63850
Average Cost Per Plate*				\$.12122

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

[illegible]

*Plates of three sizes: large, medium, small.

COST OF FOOD SERVED

Dishes Served	Ingredients	Amount Needed	Unit Price	Total Cost
<u>March 23, 1949</u>				
Ham-Egg Casserole	Hams, Picnic	9# 9 oz.	.37	3.53
	Eggs, Fresh	2 doz.	.45	.90
	Egg Powder	3 qt.	.20	.0852
	Bread, Stale	1/2 loaf	.16	.08
	Oleomargarine	1 c.	.29	.145
	White Sauce			
	Milk, Skim	8 qt.	.16	1.28
	Oleomargarine	1#	.29	.29
	Flour	1 1/2 #	.078	.117
	Salt	2 tb.	.48	.0012
	Pepper, Black	2 tsp.	.96	.03
Glazed Sweet Potatoes	Sweet Potatoes	1 bu.	4.75	2.375
	Sugar, White	1 #	.088	.088
	Sugar, Brown	1 #	.101	.101
	Cornstarch	1/2 c.	.116	.0145
	Oleomargarine	1/2 #	.29	.145
Green Beans	Green Beans	3/#10	.808	2.424
	Salt	1/8 c.	.48	.0012
	Oleomargarine	1/2 #	.29	.145
Buttered Whole Wheat Bread	Whole Wheat Bread	7 loaves	.16	1.12
	Oleomargarine	1/2 #	.29	.145
Dried Peach Cobbler	Peaches	6 #	.50	.0996
	Sugar, White	2 #	.088	.176
	Cornstarch	1/2 c.	.116	.0290
	Salt	1/2 tb.	.48	.0003
	Oleomargarine	1 c.	.29	.145
	Pastry			
	Flour	2 1/2 #	.078	.1755
	Shortening	1 1/2 #	.321	.401
	Salt	1/2 oz.	.48	.00045
Milk	Milk, Whole	137 1/2 pt.	.06	8.22
Kindergarten Juice	Tomato Juice	2/#5	.27	.54
Total Cost				\$ 22.80395
Average Cost Per Plate*				\$.16645

*Plates of three sizes: large, medium, small.

